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FINAL
ENVIRONMENTAL STATEMENT

For a Proposed
1973 OUTER CONTINENTAL SHELF
OIL AND GAS GENERAL LEASE SALE
OFFSHORE MISSISSIPPI, ALABAMA, AND FLORIDA

OCS SALE NO. 32
FES 73-60

Volume 4 of 5

*Consultation and Coordination
With Others*

Prepared by the
BUREAU OF LAND MANAGEMENT
U.S. DEPARTMENT OF THE INTERIOR

Director

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INTERIOR

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IX. CONSULTATION AND COORDINATION WITH OTHERS

INTRODUCTION

This section presents an account of the consultation and coordination processes involved in the preparation of the draft statement, which was made available to the public on July 20, 1973, the period of review of the draft statement, and steps leading to preparation of the final environmental statement. All official review comments of the draft statement are attached, and where appropriate, the disposition of pertinent comments leading to preparation of the final environmental statement are indicated.

A. Preparation of the Draft Environmental Statement

1. Federal Participation

In the preparation of this Draft Environmental Statement data and review comments have been solicited from the following Bureaus and offices within the Department of the Interior.

Geological Survey

Bureau of Sport Fisheries
and Wildlife

National Park Service

Bureau of Mines

Bureau of Outdoor Recreation

Office of Economic Analysis

Office of the Solicitor

Office of Oil and Gas

Office of Environmental Project
Review

In addition the following agencies and Departments are consulted during the preparation phase of environmental statements on OCS leasing proposals.

Environmental Protection Agency

Treasury Department

Department of Commerce

Department of Transportation

Department of Defense

Federal Power Commission

Atomic Energy Commission

2. State Participation

In the preparation of this Draft Environmental Statement advice and data were solicited from the following offices listed by State.

State of Mississippi

Board of Water Commissioners

Air & Water Pollution Control Commission

Game & Fish Department, Fisheries Division

Parks Commission

Oil & Gas Board

Agriculture & Industry Board, Marketing Council

Archives & History

Office of Federal-State Programs

Office of Science & Technology

State Geologist

Gulf Coast Resources Laboratory

Geology Section

Fisheries Biologist

Ecology Section

Marine Resources Council

Marine Conservation Commission

Petroleum Council

Biology Department - University of So. Mississippi

Southern Mississippi Planning and Development, District

Mississippi Research and Development Center, Division of
Outdoor Recreation

Gulf Regional Planning Commission

State of Alabama

State Geologist
(Also State Oil & Gas Supervisor)

Assistant State Attorney General
(Also Attorney for Oil & Gas Board)

Assistant State Geologist
(Also Assistant State Oil & Gas Supervisor)

Geologist, Oil & Gas Board

State Geological Survey - Environmental Section

Marine Environmental Sciences Consortium

(University Group (17 universities))

Alabama Development Office, Office of State Planning

Alabama Conservation Department, Parks Division
Bureau of Outdoor Recreation

South Alabama Regional Planning Commission

Alabama Department of Conservation
Seafood Division - Dauphin Island

Marine Environmental Sciences Consortium
Dauphin Island

State of Florida

Division of Interior Resources
Bureau of Geology

Florida Coastal Coordinating Council

Florida Division of State Planning
Bureau of Intergovernmental Relations
Bureau of Land Planning

Florida Division of Recreation and Parks

Escambia-Santa Rosa Regional Planning Commission

Tampa Bay Regional Planning Council

N.W. Florida Development Council & Economic
Development District

University of West Florida (Pensacola)

Florida Department of Natural Resources (Tallahassee)
Division of Game and Fresh Water Fish
Division of Marine Resources

Florida DNR, Marine Laboratory (St. Petersburg)

State University System of Florida Institute of
Oceanography (St. Petersburg)

University of Florida (Gainesville)

3. Public Participation

A public meeting was held in Panama City, Florida on May 24, 1973 to explain the environmental analyses procedures used by the Department before decisions are made to offer specific tracts for oil and gas leasing. This meeting was sponsored by Senator Lawton Chiles of Florida and was attended by 300-500 people.

Department of Interior officials led a discussion on the purpose and objectives of the environmental analysis process and distributed outlines of procedures used, a listing of factors considered in the

initial tract selection process, and listings of Federal and State agencies contacted for data to be used in the preparation of the environmental statement.

The major areas of concern expressed by members of the public were:

- 1) The veracity of the "energy crisis"
- 2) Compatibility of offshore mineral operations with Department of Defense activities in the same areas.
- 3) Degree of state control on OCS operations
- 4) Possibility of state sharing in OCS receipts
- 5) Liability in the event of pollution incidents.

In addition concern was expressed over adequacy of operating regulations and enforcement procedures.

People in support of the sale generally discussed the need for domestic production because of the balance of payment problems, the benefits to sport fishing and general lack of conflict with commercial fishing and the high use of oil and gas in the State of Florida.

A second public meeting was held in St. Petersburg, Florida on July 28, 1973. This meeting was presided over by Congressman Bill Young and was attended by state and local officials, representatives of private interest groups, and concerned members of the general public. Overall, the concerns expressed previously at the Panama

City meeting were reiterated. However, additional issues were identified as:

- 1) Need for consideration of alternatives to the proposed action unique to Florida.
- 2) Need for preparation of cost/benefit analyses.
- 3) Need for a public referendum concerning whether or not to proceed with the proposed sale.

B. Coordination and Review of the Draft Statement Leading to Preparation of the Final Environmental Statement

After the draft statement was prepared, copies were made available to Federal and State governmental agencies and the public. Comments and views were solicited from governmental agencies relative to the draft statement and the proposed action.

In addition, comments and advice were solicited from the public at large, through formal and informal correspondence, and at a Public Hearing held on August 21, 22, and 23, 1973, in Tallahassee, Florida.

1. Federal Agencies

The following section contains all comments of Federal agencies from whom review comments of the draft environmental statement were received. Where appropriate, the disposition of their comments is indicated and any unresolved issues are identified. Remarks of this nature are printed on green paper and precede actual presentation of the review agency comments. In this way, we hope that the Department's responses to many of the issues raised can be easily located and oriented to the agency who brought the issue to our attention in the first place. Thus, the Department's response will be on green paper followed by the respective agency's review comments which are reproduced on white paper.

These points are discussed in the following sections of the report. The first section is devoted to a discussion of the general situation in the field of international law.

The second section is devoted to a discussion of the general situation in the field of international law. The third section is devoted to a discussion of the general situation in the field of international law. The fourth section is devoted to a discussion of the general situation in the field of international law.

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1. General Situation

The following section contains all comments of the committee. The first section is devoted to a discussion of the general situation in the field of international law. The second section is devoted to a discussion of the general situation in the field of international law. The third section is devoted to a discussion of the general situation in the field of international law. The fourth section is devoted to a discussion of the general situation in the field of international law. The fifth section is devoted to a discussion of the general situation in the field of international law. The sixth section is devoted to a discussion of the general situation in the field of international law. The seventh section is devoted to a discussion of the general situation in the field of international law. The eighth section is devoted to a discussion of the general situation in the field of international law. The ninth section is devoted to a discussion of the general situation in the field of international law. The tenth section is devoted to a discussion of the general situation in the field of international law.

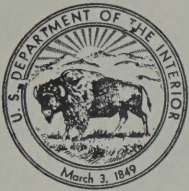
a. Bureau of Outdoor Recreation (BOR)

The BOR provided information concerning the Land and Water Conservation Fund which receives funds from OCS contributions. They also suggest that certain State liaison officers be provided an opportunity to review the draft environmental statement.

Disposition

The information concerning the Land and Water Conservation Fund has been incorporated in the text of the final environmental statement (FES). See Vol. 1, Section I.C.4.h.

Review of the draft statement by State agencies was provided in accordance with procedures established in the CEQ Guidelines pertaining to preparation of environmental statements and OMB Circular A-95 (revised) concerning State and local review of environmental statements.



United States Department of the Interior

BUREAU OF OUTDOOR RECREATION
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

DES 73-41

AUG 24 1973

Memorandum

To: Director, Bureau of Land Management (390)

From: Director, Bureau of Outdoor Recreation

Subject: Comments on Draft Environmental Statement Concerning Proposed
1973 Outer Continental Shelf Oil and Gas General Lease Sale
Offshore Mississippi, Alabama, and Florida (DES 73-41)

We have reviewed the subject draft environmental statement as requested in your memorandum of July 18, 1973, and offer the following comments:

1. The description of the Land and Water Conservation Fund (pages 18 and 19) tends to be inaccurate because of amendments to the original Land and Water Conservation Fund Act of 1965 (P.L. 88-578). Further, we see no particular merit in a discussion of the Secretary's Contingency Reserve in an environmental statement of this type. In addition, the question of non-conforming uses of Fund-assisted projects should be mentioned because of the implications of that question regarding emergence of underwater pipelines and shore-based facilities. Thus, we suggest that the following text be inserted in the final statement in lieu of the material on pages 18 and 19 of the draft:

"h. Land and Water Conservation Fund

The Land and Water Conservation Fund, established by the Land and Water Conservation Fund Act of 1965 (P.L. 88-578) as amended, and administered by the Bureau of Outdoor Recreation, Department of the Interior, was formed to develop and preserve outdoor recreational resources for the benefit and enjoyment of all Americans of present and future generations.

"Federal motorboat fuel taxes and moneys realized from the sale of surplus Federal real property are credited to the Fund. In addition, oil and gas, sulfur, and salt royalties credited to the U.S. Treasury from Outer Continental Shelf operations, together with lease rentals and bonuses from OCS lease sales, are earmarked to the Land and Water

Conservation Fund in amounts necessary to sustain it at \$300 million. OCS contributions to the Fund are as follows:

<u>Fiscal Year</u>	<u>Fund Requirement</u>	<u>Funds From OCS</u>	<u>Percent From OCS</u>
1969	\$200 million	\$126.9 million	63
1970	\$200 million	\$107.9 million	54
1971	\$300 million	\$210.1 million	70
1972	\$300 million	\$223.7 million	75
1973	- - - Data not available	- - - -	-

"Grants-in-aid under the Fund program may be made only to the States, and through them, to their political subdivisions. The Federal money pays half the cost of the preparation of statewide comprehensive outdoor recreation plans, land acquisition, and development of facilities for public outdoor recreation. Appropriations from the Fund are used by the National Park Service, the Bureau of Land Management, and the Bureau of Sport Fisheries and Wildlife (Department of the Interior), and the Forest Service (Department of Agriculture) to acquire lands for recreation purposes at authorized Federal areas.

"Lands and waters acquired or developed through Fund assistance are permanently dedicated to outdoor recreation use. Such lands and waters cannot be converted to a use other than recreation without the approval of the Secretary of the Interior."

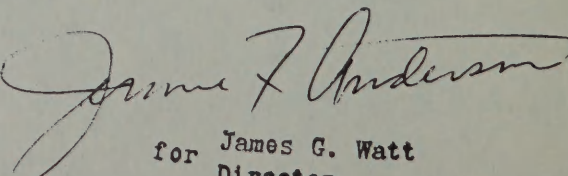
2. In our view, the draft statement should be reviewed by the State officials in Alabama, Mississippi, and Florida designated by their respective Governors as State Liaison Officers for purposes of administration of the Land and Water Conservation Fund. They are:

Mr. Claude D. Kelley
Commissioner
Department of Conservation and
Natural Resources
Administrative Building
Montgomery, Alabama 36104

Mr. Ney C. Landrum
Director
Division of Recreation and Parks
Department of Natural Resources
J. Edwin Larson Building
Tallahassee, Florida 32304

Mr. Rae Sanders
Outdoor Recreation Director
Mississippi Park System
Robert E. Lee Building
Jackson, Mississippi 39201

We appreciate the opportunity of offering these comments.


for James G. Watt
Director

b. Bureau of Sport Fisheries and Wildlife (BSF&W)

The BSF&W indicates in their review comments that they feel the draft environmental statement (DES) lacks definitive information on how transportation of product from the offshore to onshore areas will be accomplished. They question the veracity of information presented by a witness at a public hearing and included in the DES concerning burial of pipelines beyond the 200 foot contour. They supply information concerning wildlife refuges and an endangered bird which was omitted or misidentified in the DES. They suggest the need for a stipulation requiring restoration of dunes disrupted by pipeline crossings and request that they and other interested parties be included in environmental assessments involving proposed offshore pipelines.

Disposition

A considerable effort has been made since the DES was released to obtain, analyze and present data pertaining to how oil and gas would be transported to shore in the event this sale should proceed and to take positive steps to reduce, eliminate or otherwise mitigate potential adverse effects associated with transportation methods. Generally our concern centered on two factors: (a) unrestricted barging of oil presents an unnecessary level of potential risk to the environment; and (b) an aggressive management program for pipelines resulting from OCS sales is needed to prevent

or minimize environmental damage and to avoid a scattered, Louisiana-type offshore pipeline situation from occurring in new areas of OCS development.

With regard to barging, we have recommended a stipulation that would restrict barging to testing an exploratory well and defining a field. (See Vol. 2, Section IV.D.1). This would significantly reduce the amount of pollution that could result from this activity as earlier predicted in the DES. Also, it would emphasize the use of pipelines as an environmentally safer method of transporting oil from the offshore to processing points onshore.

The Department is moving ahead on problems concerning pipelines. We will establish, wherever feasible, pipeline corridors. A suggested special stipulation giving attention to the importance the Department attaches to this issue has been incorporated in the FES. (See Vol. 2, Sec. IV. C.). With regard to the proposed MAFLA sale a contract study will be initiated and completed within one year from the date of the sale with the purpose of identifying and providing information on the least environmentally hazardous areas for routing pipeline corridors. Once these routes are tentatively defined, coordination with appropriate state agencies will be undertaken. This is necessary in view of the fact that our authority to require pipeline corridors is limited to Federal areas of the continental shelf. Therefore, a coordinated Federal-State effort will be required if corridor routings are to be effectively implemented. In addition, the Department's Environmental Assessment

Committee (EAC), consisting of representatives from numerous bureaus within the Department, will be actively involved in establishing exact corridor routes and many other aspects of OCS pipelines including the question of burial beyond the 200 foot contour. The EAC will also be consulted and their participation encouraged with regard to assisting BLM in its environmental assessment of specific pipeline proposals in the Gulf of Mexico for major lines to shore prior to granting right-of-way permits. Since the BSF&W is a member of this Committee their opportunity for participation is assured. This coordinated assessment effort will be spearheaded, however, by BLM's environmental assessment team in New Orleans. (See Vol. 2, Section IV.C.).

In addition to the above efforts to improve OCS pipeline management, the Bureau of Land Management and the Geological Survey have taken steps to clearly define the administrative and operational roles for OCS pipeline responsibilities. The purposes and objectives are to: 1) Minimize or eliminate environmental damage; 2) Better serve industry and public interests; and, 3) Streamline the regulations and procedures for most efficient and uniform administration, operation, and industry compliance.

The Geological Survey and the Department of Transportation's Office of Pipeline Safety have joint responsibilities for pipelines on the

outer continental shelf. These two agencies are presently cooperating and coordinating their activities to insure uniform management and control of pipelines in Federal areas of the continental shelf.

The BSF&W's suggestion to include a stipulation that would require revegetation of dunes disrupted by pipeline placement activities is misdirected. This is a matter solely within State or local authority and jurisdiction where Federally owned lands are not involved. However, we agree that a requirement leading to restoration of dunes in the event they are crossed by pipelines should be considered by appropriate State agencies. Moreover, we would certainly encourage pipeline companies to do this as a matter of course in the absence of such a requirement.

The information concerning refuges and the eastern brown pelican has been incorporated in the FES.



ADDRESS ONLY THE DIRECTOR,
BUREAU OF SPORT FISHERIES
AND WILDLIFE

United States Department of the Interior

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

WASHINGTON, D.C. 20240

In Reply Refer To:
FSF/SQ

SEP 19 1973

Memorandum

To: Director, Bureau of Land Management
Attention: Code 392

From: ~~Acting Assistant~~
Director, Bureau of Sport Fisheries and Wildlife

Subject: Review of Draft Environmental Statement Pertaining
to the Proposed Oil and Gas Lease Sale Offshore
Mississippi, Alabama, and Florida (OCS Sale No. 32)

In response to your request of August 16, 1973, we have reviewed the subject draft statement and offer the following comments.

We feel the draft statement presents an adequate description of the proposed lease sale, the existing environment and the potential impact of the project on the economy and the natural resources within the sale area.

In our view the statement is inadequate, however, in its discussion of the various transportation systems which may be employed, i.e., barge, tanker, pipeline. The statement is very exacting in its description of how these services are routinely performed but lacks definitive information on how they are to be carried out in this particular lease sale. Another question is the testimony cited on pages 56-57 concerning pipeline burial. The figures presented indicate that to go from 200 feet to 350 feet, which involves an increase of some 75 percent in head, would require an increase in pump horsepower of greater than 300 percent and an increase in water volume of some 270 percent. Except for leakage and frictional losses it seems that the latter two values should be almost proportional to the increase in pressure.

The statement correctly identifies the Gulf Islands National Seashore but omits the De Soto National Memorial near Tampa Bay on pages 160 and 162. The wildlife refuge identified on page 162 as St. Mary's is incorrect and should be listed as St. Marks. Under item E of that same section, Anclote should be deleted as a Federal Refuge as it was

recently transferred to the State of Florida. Under the section on State Parks (page 166) Fort De Soto State Park in Florida is not identified.

The statement notes (page 275) that beach erosion could result from pipeline laying operations and then continues on into other aspects of the proposed sale. It would seem that a fairly simple stipulation requiring revegetation on dune crossings might serve to mitigate this potential impact. Under the present system, however, consideration of secondary impacts of OCS lease sales are not receiving adequate treatment. We have suggested in our comments on a previous draft that an environmental statement on pipelines be prepared as one method of treating possible environmental effects which postdate the lease sale. The response to this suggestion was that environmental assessments would be undertaken to determine whether a separate impact statement should be prepared. We now suggest that consideration be given to having representatives of this Bureau and other interested parties be allowed to participate in these ongoing assessments.

The eastern brown pelican (Pelecanus occidentalis carolinensis) should be added to the list of endangered birds appearing on page 125 of the draft statement.

We appreciate the opportunity to review the draft and hope that our comments will be of assistance in the preparation of the final statement.

Kenneth E. Black

c. Office of Oil and Gas

The Office of Oil and Gas reviewed the DES but had
no comments.



United States Department of the Interior

OFFICE OF OIL AND GAS
WASHINGTON, D.C. 20240

SEP 6 1973

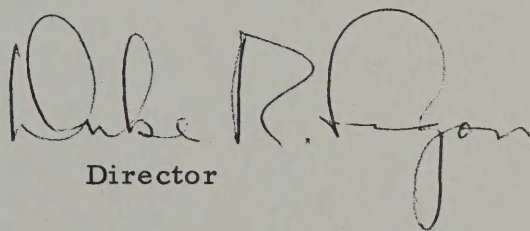
Memorandum

To: Director
Bureau of Land Management

From: Director, Office of Oil and Gas

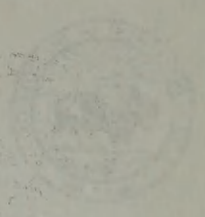
Subject: Draft Environmental Statement Concerning
a Proposed Oil and Gas General Lease Sale
Offshore Mississippi, Alabama, and Florida

In response to your memorandum of July 18, 1973, we have no comments on the subject Draft Environmental Impact Statement.


Director

Department of the Interior

Office of the Secretary
Washington, D.C.



SEP 1 1915

Administrative
Division
The following is a list of the
names of the persons who have
been appointed to the various
positions in the Department of the
Interior since the 1st of January,
1915, to the 1st of September,
1915. The names are given in
alphabetical order of the last
name.

ALCOCK, J. H.
ALCOCK, J. H.
ALCOCK, J. H.

d. Bureau of Mines

The Bureau of Mines reviewed the DES and provided numerous comments and suggested changes.

Disposition

All suggested changes, where appropriate, have been incorporated in the FES.



United States Department of the Interior

BUREAU OF MINES
WASHINGTON, D.C. 20240

August 28, 1973

Memorandum

To : Director, Bureau of Land Management

Through : Assistant Secretary--Energy and Minerals

From : Director, Bureau of Mines

Subject: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

Our Division of Fossil Fuels has reviewed the draft environmental statement for the proposed 1973 oil and gas lease sale offshore Mississippi, Alabama, and Florida. The proposal would offer 159 tracts (886,458 acres) of Outer Continental Shelf (OCS) lands for oil and gas leasing.

Because of the scope and far-reaching effects of the proposed action, we recognize the difficulties under which the authors have worked. In general, we believe the statement is well-arranged and covers the necessary topics. We believe the statistics on page 2 would give a better perspective of the place of oil and gas in the whole energy picture if it included projected demand for all energy sources. These figures are available in the same reference you have used.

In the section on environmental impact of the proposed sale, mention should be made of the general favorable impact of the availability of additional supplies of clean domestic energy. The section appears to consider only adverse impacts.

Specific comments follow:

Page 41, line 3: There is no such thing as a typical offshore well.

Page 41, item 3: What is an abnormal volume of cuttings or usage of mud?

Page 64, part 1: Production from tracts in Appalachicola South--Inform reader about the disposition of natural gas when oil is barged.

Page 65, 1st paragraph, line 3: Redefine "quite productive."

Memo. to Director, Bureau of Land Management, Subj: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

Pages 423-442: See review comments submitted by Assistant Director--Mineral Supply, Bureau of Mines, August 1, 1973, to Division of Marine Minerals, which were not incorporated in this draft. With corrected page numbers, those comments are repeated here.

Page 441, lines 10-11: Should read ". . . seal off zones where loss of drilling mud circulation may occur as drilling proceeds. Strings of casing are successively smaller as the depth increases."

Page 424, last par., and p. 61, line 1: This paragraph should be revised about as follows: "Final steps in well completion involve the setting of a string of production casing and perforating it opposite the producing zone. A string of smaller pipe called tubing is installed. At the surface, either a 'Christmas tree' or a pump is connected to the tubing. The Christmas tree-- a complex valve unit-- is used on a flowing well, one in which formation pressure is high enough to force the oil, gas, or water to the surface. A pumping unit is installed on wells in which the pressure is insufficient to force the fluid to the surface. Only a portion . . ." continue as written.

Page 426, line 7: Delete ". . . near the well. . . ."

Page 426, last 3 lines: The advent of geophysical prospecting has not brought about a marked improvement in the success ratio. New technology has been evolutionary over the past 25 years and has impacted on exploration in three ways: 1) by providing tools and methods for improving discovery efficiency, 2) by opening new oil environments (offshore, greater depths), and 3) by providing cost reductions. In spite of this, the oil in place found per new field wildcat (exploratory well) has declined since the mid-1940's. 1/

1/ National Petroleum Council, Impact of New Technology on the U.S. Petroleum Industry, 1946-1965, Chart 1, p. 5, and column 2, p. 6.

Page 429, 1st sentence: What is the specific reference for these calculations of reserves?

Page 431, line 1: Should read, "The Prudhoe Bay Field . . ."

Memo. to Director, Bureau of Land Management, Subj: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

Page 433, line 7: Should read, ". . . on Naval Petroleum Reserve No. 4 (NPR-4), the . . ."

Page 434, line 8: We find no reference in this NPC report to environmental pollution.

Page 435, lines 6-7: Change "price" to "value."

Page 435, line 6: \$3.87 should be "\$3.39."

Page 435, line 7: Change "posting at" to "averaging."

Page 435, line 9: Change "\$13 billion" to "\$11.7 billion."
(For the above figures, see U.S.B.M. Minerals Yearbook 1971, Volume 1, pp. 774, 855, and 867.)

Page 435, line 11: The use of Fig. 11-8 is not recommended because the data are 4 years old and can be updated.

Page 435, paragraph 3: Similarly, these factors could be brought up to date.
For example, there is no decrease in growth rate of petroleum demand, there is no growth in unused productive capacity of crude oil, and foreign oil is no longer low cost.

Page 437, par. 2: Refining should be included in these primary operations.

Page 440, line 13: The tabulation does not make evident any relationship to density of population unless it is assumed that tank trucks are used only or mostly in cities and towns. This assumption, if used, is incorrect -- tanks trucks are used for crude oil from oilfields to refineries (or pipeline terminals) and for products between refineries and outlying cities and towns.

Page 441: Missing

Page 442, line 4: Should read ". . . pipelines up the Mackenzie River to the potential . . ."

Memo. to Director, Bureau of Land Management, Subj: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

Page 442, line 8: Should read ". . . cubic feet per barrel. . . ."

Page 445, line 20: "determinial" should be "detrimental."

Page 463, paragraph 1: Should be modified and updated as follows:

The potential Gas Committee has estimated the remaining undiscovered reserve of gas in the United States at 1,146 tcf as of December 31, 1972, and has divided these reserves by region and degree of uncertainty. This amount is approximately 4.3 times 1972 proved reserves of 266 tcf, indicating that substantial additional reserves may be developed if economic incentives improve.

Pages 473-501: In Section VIII. B.3., the spelling of sulfur (sulphur) should be consistent. We believe "sulfur" is preferred.

Page 476: Suggest "cutting machine" rather than "trackless cutter." At the preparation plant the coal would be "sized" rather than "sorted."

Suggest term "loading machine" be used rather than "automatic loader."

Page 477: This is a poor diagram. The means of coal cleaning, such as heavy media, etc., are not shown. Diagram appears to be limited to processing of anthracite.

Page 478, line 9-10: Roof bolting is also an aid to conventional mining.

Page 479, line 2: Add a footnote crediting this statement to: Gomez, Manuel and Kathleen Hazen. Evaluating Sulfur and Ash Distribution in Coal Seams by Statistical Response Surface Regression Analysis. Bureau of Mines Report of Investigations 7377, 1970, 120 pages.

Before sentence beginning, "Applications. . .," add new sentence as follows: "Similar studies have shown good possibilities of forecasting other properties of coal seams in place, prediction of low-temperature carbonization properties, and prediction of coal grindability. x,y,z/

Memo. to Director, Bureau of Land Management, Subj: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

x/ Gomez, Manuel and Kathleen Hazen. Prediction of Coal Grindability from Exploration Data. Bureau of Mines Report of Investigations 7421, 1970, 34 pages.

y/ Gomez, Manuel and D. J. Donaven. Prediction of Low-Temperature Carbonization Properties of Coal in Advance of Mining. Bureau of Mines Report of Investigations 7561, 1971, 88 pages.

z/, Forecasting the Properties of Coal Seams in Place. Bureau of Mines Report of Investigations 7680, 1972, 53 pages.

Page 479, line 7: 50 cubic yards per hour is an obvious error. Cheaper explosives such as ammonium nitrate-fuel oil are now in use.

Page 481, 1st line after table: Should read ". . . coal-in-place figure of 3.21 trillion . . ."

Page 481, line 3: Should be on one line--

"Mapped and Explored: 0-3,000' Overburden	1.56"
---	-------

Page 481, next to last line: "reserves" should read "resources."

Page 483, line 4: Recovery factor for area surface mining is 80 to 90 percent rather than 100 percent.

Page 484, Data in section on costs and prices are not current; 1971 or 1972 figures should be available. Coal prices vary with quality and type of coal. For example, low, medium and high volatile coals vary widely in value.

Page 485, This page needs to be rewritten in line with current prices and trends.

Page 485, line 10: Recent environmental concern has put pressures on strip mining which have altered the thinking behind this section of Mineral Facts and Problems. Passage of some of the pending bills dealing with strip mining could completely change these projections. It is believed that the percentage of coal production from surface mines will go down in 1972 to 48.2 percent as compared with 50 percent in 1971.

Memo. to Director, Bureau of Land Management, Subj: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

Page 486, last paragraph, first sentence: Improvements in methods of coal transport have not been a prime contributor to the increase in coal demand. The need for more coal to generate electrical energy was the primary reason for increased coal demand.

Page 488, line 6: Should read ". . . size of barges and power of towboats."

Page 488, line 10: Should read ". . . mine-mouth generating plants."

Page 489, item 4: Statement is not clear. What is meant: SO₂ removal technology or coal gasification?

Page 489, item 7: Enrollment in mining or mineral engineering appears to have increased in the past few years.

Page 490, credit line at bottom: Delete ". . . op. cit. . . ." and insert ". . . (1972) U.S. Energy Outlook, . . ."

Page 491, line 11: Delete ". . . flue stack emissions . . ." and insert ". . . stack gas . . ."

Page 492, Coal "resources" should be used in place of "reserves"; also applicable to the Tables on p. 493. Probably should state manufacture of coke, rather than steelmaking.

Page 495, line 14: "above" should be "low"

Page 496, line 1: Should read "Most coals contain undesirable constituents and must be cleaned"

line 2: "washer: should be "cleaning"

Page 497: What is source (reference) for Tables III-11 and III-12?

Page 498, first paragraph: Subsidence is also affected by thickness of cover.

Memo. to Director, Bureau of Land Management, Subj: Draft environmental statement, Bureau of Land Management, proposed oil and gas general lease sale offshore Mississippi, Alabama, and Florida

Page 597, 1st paragraph, line 1: The major assumption used by the NPC of oil prices in 1975 and 1985 will be higher than projected 1975 prices under currently existing contracts. This statement contradicts the time-price relationships for crude oil based upon 1968 data shown on page 435. Some discussion or clarification is required. Suggest omission of illustration on page 435, it is meaningless.

Page 611, paragraph 2, line 4, is incorrect. Imports from Mexico during 1972 totaled 8.141 bcf which when stated in terms of trillions is 0.008.

Page 620, lines 4-13: May be misleading since it does not indicate that the explosions referred to did not involve ignition. The following revision, beginning with the sixth word on line 4 through the next-to-last word on line 13, is suggested.

Studies on the possibility of violent reactions upon contact between LNG and water resulting from LNG spills are inconclusive. Tests conducted during 1969 produced several instances of violent reactions upon contact between LNG and water. No fire or ignition of vapor was observed but there was a rapid upward movement of gas accompanied by a loud "bang." A later study concluded that there was little danger of a violent reaction between normal LNG and water, and that such a reaction could result only after the methane content of the LNG has declined to 40 percent. Since the normal methane content of LNG loaded in tankers is 80-90 percent or more and the boil-off rate is approximately 0.2 percent per day a reduction aboard ship to 40 percent is not likely under current practices. In the case of a large spill, the quantity of LNG remaining after weathering into the critical composition range could be significant. However, during the weathering period, the LNG will have spread on the surface and the chance of a single large reaction appears low. In any event, the energy release potential of LNG-water reactions is relatively small. Since no chemical reaction is involved, the available energy is limited to the amount of superheat achieved during the time of direct liquid-liquid contact.

Acting Director

Model is a function of the initial conditions, the initial velocity, and the initial position. The initial conditions are the initial velocity and the initial position. The initial velocity is the velocity at the initial time, and the initial position is the position at the initial time.

Page 2. The initial conditions are the initial velocity and the initial position. The initial velocity is the velocity at the initial time, and the initial position is the position at the initial time. The initial conditions are the initial velocity and the initial position. The initial velocity is the velocity at the initial time, and the initial position is the position at the initial time.

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Page 4. The initial conditions are the initial velocity and the initial position. The initial velocity is the velocity at the initial time, and the initial position is the position at the initial time. The initial conditions are the initial velocity and the initial position. The initial velocity is the velocity at the initial time, and the initial position is the position at the initial time.

e. National Park Service (NPS)

The NPS suggests that the stipulation proposed in the DES for protection of archeological, architectural and historical values be amended. They suggest compliance with Section 106 of the National Historic Reservation Act if it is determined a property listed in the National Register of Historic places will be affected. NPS requests inclusion in the FES of additional description and identification of potential as well as eligible natural landmarks. They bring to our attention an in-completed study being undertaken by the Geological Survey and Louisiana State University which will present an inventory of potential natural landmarks in the Gulf Coastal Plain natural region. Finally, they indicate that an oil spill could have an adverse effect on NPS areas in the vicinity of the proposed sale.

Disposition

The stipulation presented in the DES (page 376) for protection of historical, archeological or architectural values has been incorporated in the FES (See Vol. 2, Sec. IV.D.1). Amendment of this stipulation is an unresolved issue at this time. This issue will be resolved pending identification of what is needed in certain areas to be responsive to NPS's concerns. The NPS states, "Further, under the stipulation, there is no assurance that final decisions

regarding protection or recovery of cultural resources will be on the advice of underwater archeological or other trained historic preservationists." In partial fulfillment of his responsibilities under the stipulation, the BLM Manager will notify NPS and seek advice concerning protection or recovery of cultural resources should a discovery be encountered. If it is determined that protection above and beyond that provided by the stipulation is needed then consideration will be given to development of an OCS Operating Order that will provide application to all existing leases on the OCS and not just to those leases which may issue as a result of this proposed sale.

The National Register of Historic Places was consulted and to the best of our estimation at this time none of the places listed in the vicinity of this sale area will be affected by the proposed action. No extra steps should need to be taken at this time.

We have expanded our descriptive section (See Vol. 1, Sec. II. F.) to include potential as well as eligible natural landmarks. The information presented by NPS has been incorporated in the FES including reference to their incompleted study.

We noted on page 329 of the DES that a massive oil spill originating from 6 of the tracts proposed for offering in this sale could impact upon the Gulf Islands National Seashore, the only national park

administered by NPS in the study area. We also acknowledge this possibility in the FES (See Vol. 2, Sec. III.J.).



United States Department of the Interior

NATIONAL PARK SERVICE
WASHINGTON, D.C. 20240

IN REPLY REFER TO:

L7619-OCC

SEP 28 1973

Memorandum

To: Director, Bureau of Land Management
Attention: Division of Marine Minerals (390)

Through: Assistant Secretary for Fish and Wildlife and Parks 473

From: Acting Assistant Director, Park Management

Subject: Draft environmental statement concerning a Proposed Oil
and Gas General Lease Sale Offshore Mississippi, Alabama,
and Florida (DES 73-41)

We are pleased to furnish you our comments on the subject draft environmental statement as requested by Acting Director George L. Turcott in his memorandum of July 18.

We appreciate the concern shown for cultural (historic, archeological, architectural) resources in the subject document. However, we believe that further protection for cultural resources subsequent to lease sales is possible. While the environmental statement notes the various preconstruction surveys that might or ought to be conducted to assure that cultural resources are given adequate consideration, the one lease stipulation proposed (page 376) seems dependent on accidental discovery of cultural values during construction. Further, under the stipulation, there is no assurance that final decisions regarding protection or recovery of cultural resources will be on the advice of underwater archeologists or other trained historic preservationists. We suggest that the stipulation be amended to require lessees to engage the services of trained underwater archeologists and persons in associated disciplines to survey all shore and submerged land areas to be physically disturbed by exploration or development, to the limit that contemporary capabilities allow; that all cultural resources that appear to meet the criteria be nominated to the National Register of Historic Places; and that determinations of the necessity for protection or disposition of discovered sites be made upon the advice of trained professionals and after compliance with the procedures established under Executive Order 11593 and Section 106 of the National Historic Preservation Act (80 Stat. 915), as appropriate. We believe that such a lease stipulation, in recognition of the responsibilities for cultural resources assigned to the Department of the Interior by the Congress and the President, would best assure against the inadvertent or unmitigated disturbance of cultural resources during construction and development activities.

Director, Bureau of Land Management

If it is determined that a property listed in the National Register of Historic Places may be affected by the proposal, the environmental statement should identify and describe each property and the expected project impacts, and indicate the steps being taken to assure compliance with Section 106 of the National Historic Preservation Act according to the procedures published in the "Federal Register" of February 28, 1973.

Also, we believe that the discussion of cultural resources under the Description of the Environment in this environmental statement could be improved by identification of areas that have a high potential for cultural values--and in which, accordingly, particular caution should be exercised to assure that they are not inadvertently threatened or destroyed. Submerged shorelines, riverbanks, deltas, and islands, for instance, have a high potential for archeological evidence of aboriginal occupation. Historical research can identify the approximate locations of many shipwrecks and point out those areas where shipwrecks have been frequent in the past. The present level of descriptive detail, we believe, is very inadequate when compared to the level of information in these categories that could be provided with an objective and appropriate approach to the subject.

Five eligible and eight potential National Natural Landmarks are adjacent to the proposed oil and gas general lease sale area offshore Mississippi, Alabama, and Florida. However, only one eligible natural landmark is mentioned in the draft statement; namely, Lignumvitae Key Natural Landmark (p. 12) which is quite distant from the proposed sale area. The thirteen areas which should be recognized in the draft environmental statement are:

Eligible Natural Landmarks

Big Cypress Bend - Collier County, Florida
Corkscrew Swamp Sanctuary - Collier County, Florida
Manatee Springs - Levy County, Florida
Rainbow Springs - Marion County, Florida
Wakulla Springs - Wakulla County, Florida

Potential Natural Landmarks

Atlantic White Cedar Area - Jackson County, Mississippi
Fahkahatchee Strand - Collier County, Florida
Gulf Hammock Area - Levy County, Florida
Mississippi Sandhill Crane Area - Jackson County, Mississippi
Pascagoula River Swamp - Jackson County, Mississippi

Director, Bureau of Land Management

Potential Natural Landmarks (cont.)

St. Marks Natural Area - Wakulla County, Florida
 Weekiwackee Spring - Hernando County, Florida
 Wekiva Springs - Levy County, Florida

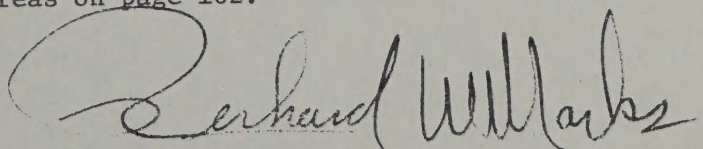
Each of these areas occurs within 20 miles of the Gulf of Mexico. Most are not precisely on the coast but due to plans for the construction of new pipeline, pipeline terminal stations, and storage and treatment facilities, we feel it imperative to identify these nationally significant natural areas which could be endangered or even destroyed by such construction activities.

In addition, the National Park Service has underway a natural history theme study of the Gulf Coastal Plain natural region. This study, which is being undertaken for the Service by the U.S. Geological Survey and Louisiana State University, will contain an inventory of potential natural landmarks that are representative of the several significant themes in the region. We expect that a number of sites will be recommended in the study that are located in or very near the area offshore Mississippi, Alabama and Florida. These sites probably will include areas typifying the following themes: (1) coastal salt marsh; (2) coastal tall grass prairie; (3) estuaries; (4) barrier islands; and (5) marine environments on the continental shelf.

This natural history theme study is not scheduled to be completed until July 1974. However, information on many sites is now being compiled by the study contractors and we expect to receive a preliminary list and descriptions of many of the potential landmarks within 6 months. This information would be available to the Bureau upon request as soon as it is received by the Service.

The proposed oil and gas general lease sale could have, in the event of an oil spill, an adverse effect on National Park Service areas in the vicinity.

DeSoto National Memorial on Tampa Bay is missing from the list of National Park Service areas on page 162.



1. The purpose of this report is to provide information on the progress of the work done during the period from 1 January to 31 March 1964.

2. Summary of work done during the period.

The work done during the period has been divided into three main areas: (a) the study of the physical properties of the system, (b) the study of the chemical properties of the system, and (c) the study of the biological properties of the system. The results of the work done in each of these areas are discussed in detail in the following sections.

The first section of the report deals with the study of the physical properties of the system. This section is divided into two parts: (a) the study of the physical properties of the system in the solid state, and (b) the study of the physical properties of the system in the liquid state. The results of the work done in each of these parts are discussed in detail in the following sections.

The second section of the report deals with the study of the chemical properties of the system. This section is divided into two parts: (a) the study of the chemical properties of the system in the solid state, and (b) the study of the chemical properties of the system in the liquid state. The results of the work done in each of these parts are discussed in detail in the following sections.

The third section of the report deals with the study of the biological properties of the system. This section is divided into two parts: (a) the study of the biological properties of the system in the solid state, and (b) the study of the biological properties of the system in the liquid state. The results of the work done in each of these parts are discussed in detail in the following sections.

3. Conclusions. The work done during the period has shown that the system is a complex one, and that it exhibits a wide range of physical, chemical, and biological properties.

4. References. The following references are cited in the report:

1. J. D. Smith, "The physical properties of the system," *Journal of Physical Chemistry*, vol. 68, pp. 1234-1245, 1964.

2. J. D. Smith, "The chemical properties of the system," *Journal of Physical Chemistry*, vol. 68, pp. 1246-1257, 1964.

3. J. D. Smith, "The biological properties of the system," *Journal of Physical Chemistry*, vol. 68, pp. 1258-1269, 1964.

f. Geological Survey (GS)

The GS submitted extensive detailed comments in review of the DES. Wherever appropriate, suggested corrections were made, information when provided was incorporated in the FES and generally all additions and corrections were made except for the items noted below.

Disposition

Page 413 - The change concerning subsea completions was not made because following completion of negotiations with the Department of Defense and the withdrawal of 12 tracts in the Pensacola area there are no tracts in this proposed sale that will require subsea completions for their safe development.

To the fullest extent possible all comments regarding the energy alternatives were incorporated in the FES.



United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

September 27, 1973

OFFICE OF THE DIRECTOR
DES 73-41

Memorandum

To: Director, Bureau of Land Management

Through: Assistant Secretary--Energy and Minerals *EJ*

From: Director, Geological Survey

Subject: Draft environmental statement concerning a Proposed Oil and Gas General Lease Sale Offshore Mississippi, Alabama, and Florida

We have reviewed the subject draft environmental statement as you requested in a memorandum of July 18. Our comments are as follows:

Page 23: The final sentence is poorly integrated into the context of the paragraph.

Page 47, lines 12 and 13: "Buoy" is misspelled.

Page 72: The geologic discussion in the text should include description of lithology, physical characteristics, and approximate thickness of formations associated with the planned resource exploration (lithology is included on figs. 8 and 12). In general, it is considered that the entire section pertaining to the geology could be made more descriptive and precise in order to provide better comprehension of the geologic setting of the project area.

Page 74: Post-Laramide deposition in the Gulf is throughout the Cenezoic rather than just through the Holocene.

Page 74, line 4: Mississippi Fan is the term accepted by the Board on Geographic Names, not Cone.

Page 77: The actual shelf edge in the Gulf of Mexico is closer to 450 feet than to 600 feet. If the statement refers to the "legal shelf" it should so state.

Page 77: Gradients on the shelf and slope are discussed, but no figures are given; in general, shelf gradients are less than 1 degree and slope gradients approach 5 degrees. In some places along the Florida escarpment slopes of 40 degrees are attained, but this is outside of the sale area.

Page 79: More than several fields have been in operation in Mississippi since 1939. At least 133 fields have been discovered with Mesozoic production. In addition there are 23 Mesozoic fields in Alabama and three in the north in the Florida panhandle. This does not include the Paleozoic fields to the north in a different trend.

The following table is a breakdown of the fields by age of production:

<u>Number of Fields in Mississippi, Alabama, and Florida</u>		<u>Age of Production</u>
		Upper Cretaceous (Ku)
		Lower Cretaceous (Kl)
		Upper Jurassic (Ju)
	51	Ku alone
	22	Kl alone
	58	Ju along
	11	Ku and Kl
	3	Ku and Ju
	8	Kl and Ju
	<u>2</u>	Ku, Kl and Ju
TOTAL	155	

Page 80: To what does "upland" refer?

Page 80: The implied magnitude of onshore production in the Lower Cretaceous Sunniland formation of south Florida is questionable. The trend, not the structure, appears to go offshore. The Lower Cretaceous of south Florida contains no sandstone. Clastic siliceous interbeds are only anticipated off the panhandle under the Destin Anticline.

Page 80, lines 17-23, "one structure is of particular interest . . ."
This description is placed under "Geologic Framework," etc., with no
mention being made of the source of the information, which was USGS
seismic reflection data.

Page 81: Table 5 is inadequate and out of date. See comment on page
79, above.

Page 83, figure 13: The map showing "Potentially unstable ocean floor"
is carelessly drawn and shows no relationship to the blocks to be offered.
This gave rise to intemperate statements in the press about "six of the
underwater tracts . . . were ranked as highly hazardous because (of)
. . . an unstable bottom." Even though the text belies this (p. 84, l.
9-10, "There have been no geologic hazard areas reported in those tracts
included . . ." etc.), the map can be misleading. The cross-hatched
area (source?) actually is barely tangent to the westernmost of the
tracts involved. Either the tracts should have been spotted on the map
to show this, or the area east of the delta should not have been cross-
hatched.

Page 83: Seismic hazards are extremely unlikely in this area, but it
is not correct to say that there is no risk.

Page 84: The map (fig. 13), together with the map from A Summary Knowl-
edge of the Eastern Gulf of Mexico, State University Systems of Florida,
Institute of Oceanography, 1973, indicates mud bottoms in the vicinity
of the westernmost tracts on the sale. The text contradicts this.
Shallow seismic interpretation indicates stable bottom conditions. How-
ever, the westernmost tracts appear to be adjacent to unstable bottoms,
and perhaps bottom conditions should be reaffirmed.

Additional geologic hazards to be mentioned are the submerged karst
topography extending offshore from the Big Bend area, and the cavernous
limestone at the base of the Eocene, which is a potential lost circula-
tion zone during drilling operations. Any onshore fresh-water aquifers
encountered offshore should be protected, even if they contain salt water,
downdip.

In addition, tracts located south of the panhandle between Mobile Bay
and Cape San Blas, in water depths from 50 to 100 fathoms, are in an
area of relief reef pinnacles averaging 20 to 30 feet in height and
0.4 to 1.7 miles in width. These relief features should be considered
when placing structures on the sea floor.

Pages 84-85: A discussion of anticipated remedial or mitigative measures planned to accommodate potential geologic hazards such as high gas pressures and the presence of hydrogen sulfide is necessary.

Pages 84-85: Such shallow hazards as mudwaves, shallow faults, or near-surface gas pockets ". . . are identified prior to drilling operations and the operator is notified . . ." A reference should be inserted here to Section IV.D.5, Geophysical Information, pages 379-381, to indicate that these hazards are to be identified by the government in the normal practice of OCS management.

Page 197: Reserves for 1972 are 2,565,862,000 bbls. This is 182,448,000 less than 1971 reserves.

Page 224: Oil probably came up along a pre-existing fault.

Page 301, line 1: Shell collecting and painting; line 3, period misspelled.

Page 313, line 1: Production of crude oil along the Gulf Coast has peaked (summer, 1972).

Page 377: We recommend that the second sentence of stipulation be altered to read, "Within twelve hours after notification of the occurrence of a significant oil spill, as determined by the Area Supervisor (distance from shore permitting) the lessee shall . . ."

Page 413: Inasmuch as some MAFLA tracts may require subsea completions, deletion of paragraph 3 is recommended.

Pages 423-27: The entire section entitled "Technological Processes" warrants rewriting in order to provide a more explicit explanation of oil and gas development. Obvious errors in this section include: "three," misspelled (last sentence, p. 423); one rather than three or more casing strings may be used; "lost" not "last" circulation; deep casing to pass through the surface pipe, not drill string (p. 424, second paragraph); an incomprehensible discussion of the final pumping procedures (p. 424, third paragraph, and p. 426, first paragraph). The sentence concerning impurities is not understandable (p. 426, third paragraph). The statement (p. 426, last paragraph) concerning geophysical prospecting methods should be altered to read, "The development of modern geophysical technology has brought about significant improvements in the prospecting methods used in the search for oil and gas." As stated, the sentence is incorrect, as the amount of remaining undiscovered reserves has declined and the exploration-success ratio has not been improved.

Page 442: A citation for the conclusions included in the discussion on the Alaskan oil situation should be provided.

Page 454: "With," not "will" (line 15).

Page 455, last sentence: Cite the source of the conclusion concerning regulations and standards applied to gas realized by nuclear stimulation.

Page 456: The last sentence is incomplete, "geologic . . ."

Page 458: Cite the source of the conclusion reached in this statement.

Page 493, second paragraph: This should read "high-sulphur."

Page 495, second paragraph, line 8: "Sludge."

Page 528: Citation D. C. Metha.

Page 530: Citation D. C. Metha.

Page 549, footnote: Correct to read, "Head refers to height of column for use in calculating water pressure per unit area."

Page 570, lines 6 and 7: "Plutonium" is misspelled.

Page 605: The last sentence is incomplete.

Page 641: Is this page intentionally identical to page 624?

Attachment 3: Inasmuch as this illustration is uninformative, it is recommended that it be replaced by a columnar section pertinent to the project area, indicating the appropriate sequence of lithologies, ages, and thicknesses.

Henry J. Geller
Acting Director

g. United States Coast Guard (USCG)

The USCG reviewed the DES and had no objections to the proposed action.

Disposition

None required.



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

MAILING ADDRESS: (G-WS/83)
U.S. COAST GUARD
400 SEVENTH STREET SW.
WASHINGTON, D.C. 20590
PHONE: 202-426-2262

• AUG 28 1973

Mr. George L. Turcott
Acting Director
Department of Interior
Bureau of Land Management
Washington, D. C. 20240

Dear Mr. Turcott:

This is in response to your letter of 18 July 1973 concerning the draft environmental impact statement regarding a proposed Outer Continental Shelf oil and gas general lease sale.

The Department of Transportation has reviewed the material submitted. We have no comments to offer nor do we have any objection to the proposed lease sale.

The opportunity to review this environmental impact statement is appreciated.

Sincerely,

R. I. PRICE
Captain, U. S. Coast Guard
Deputy Chief, Office of Marine
Environment and Systems
By direction of the Commandant



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LIBRARY OF CONGRESS

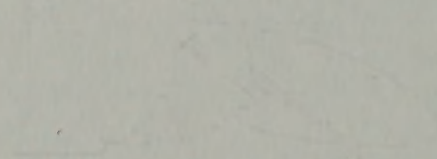
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h. Atomic Energy Commission (AEC)

The AEC reviewed the Nuclear Power portion of the alternatives section of the DES and found it responsive to previous AEC comments.

Disposition

No additional steps were required.



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

August 31, 1973

Department of the Interior
Bureau of Land Management
Division of Marine Minerals (390)
Washington, D. C. 20240

Dear Sir:

This is in response to your letter of July 18, 1973 transmitting your draft environmental statement concerning a proposed Outer Continental Shelf Oil and Gas General Lease Sale for review and comment. We have reviewed the Nuclear Power and Special Considerations sections and find that they have been responsive to our comments on a previous draft. A few editorial-type comments have been submitted directly to Department staff for consideration.

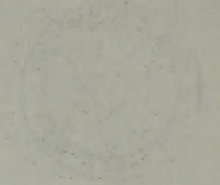
Thank you for the opportunity to review the draft statement.

Sincerely,

A handwritten signature in cursive script, appearing to read "W. H. Pennington".

W. H. Pennington
Assessments and Coordination
Officer
Division of Biomedical
and Environmental Research

AT THE COURT OF COMMON PLEAS
IN AND FOR THE COUNTY OF MICHIGAN



IN SENATE

THE COURT OF COMMON PLEAS
IN AND FOR THE COUNTY OF MICHIGAN
DO HEREBY CERTIFY THAT
THE FOLLOWING IS A TRUE AND
CORRECT COPY OF THE
ORIGINAL FILED IN THE
OFFICE OF THE CLERK OF THE
SAID COURT.

IN WITNESS WHEREOF, I have hereunto set my hand and the seal of the Court of Common Pleas, Michigan, at Lansing, Michigan, this 1st day of January, 1901.

CLERK OF THE COURT OF COMMON PLEAS

FILED FOR RECORD
IN THE OFFICE OF THE CLERK
OF THE COURT OF COMMON PLEAS
IN AND FOR THE COUNTY OF MICHIGAN

THIS 1st DAY OF JANUARY, 1901

i. Federal Power Commission (FPC)

The FPC indicates that it would like to have us identify the percentage of tracts expected to be gas prone and the percentage expected to be oil and gas prone. They suggested that a discussion of the deteriorating gas and oil supply situation be provided. That maps of artificial reefs and upland areas be provided, and location of pipeline corridors be indicated. That we describe all pipeline laying methods and provide a detailed study of the marshes of Mississippi, Alabama, and Florida. That abandoned pipelines be considered as an irreversibly committed resource.

Disposition

Identification of gas prone tracts and oil and gas prone tracts cannot be provided for this proposed sale because there has not been any previous drilling or production in this area. Without an established history of drilling activity, gas prone and oil and gas prone areas can not be predetermined with certainty.

Anyone interested in the deteriorating oil and gas supply situation is encouraged to consult FPC's comments concerning this matter.

A map has been prepared and included in the FES showing approximate location of artificial reefs offshore Mississippi, Alabama and Florida. (See Vol. 1, Section II.F.2.b.)

A map showing probable locations of pipeline corridors can not be provided at this time. Exact location of corridors will be determined following completion of a contract study, in-house analyses and after consultation and coordination with appropriate State authorities and industry representatives. (See Vol. 2, Sec. IV.C). This means that a corridor routing and pipeline transportation framework will be established before any production from this proposed sale ensues (at least within approximately three years from the date of the sale). See also Vol. 1, Sec. I.H.5.

The petroleum industry has preliminarily identified possible onshore receiving points for pipelines and the estimated total number of pipelines to shore needed to develop the area encompassed by this proposed sale. These have been depicted on a map (See Vol. 2, Sec. III.H.1). It should be added, however, that these areas must be viewed with conjecture at this point in time because they probably will be affected by location of corridors and certainly by the type and quantity of production, if any, which is found and by scrutiny and approval of appropriate State authorities concerning their exact locations onshore. The purpose for including the map is to indicate those onshore areas of preliminary interest to the offshore oil industry for pipeline placement. This preliminary identification of onshore pipeline locations indicates that industry has no plans at this time that would involve pipeline placement through vast

expanses of marsh and mangrove swamps. Moreover, it should be kept in mind that if disruption of wetlands is to be avoided at all costs then this is a decision that properly rests with authorities from the affected States. Additional pipelaying methods applicable to conditions in the area of this proposed sale have been included in the FES. (See Vol. 1, Sec. I. F.4.a).

We are not convinced of the importance of considering abandoned pipelines as an irreversibly committed resource. We assume that pipelines are abandoned because they have served their purpose and their use is no longer required or that they are in such a degraded condition as to be no longer capable of fulfilling their original purpose. They represent an irreversibly committed resource once they have outlived their usefulness and can not be recycled or otherwise altered to be of use to man, but we are uncertain as to the importance, given the small numbers of abandoned pipelines on the outer continental shelf, this has to man and his environment. Consequently, this is an unresolved issue.

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

Mr. Donald Truesdell
Supervisory Environmental Specialist
Department of the Interior
Bureau of Land Management
Division of Marine Minerals (390)
Washington, D. C. 20240

SEP 1 1973

Dear Mr. Truesdell:

We appreciate the opportunity to comment on your draft environmental statement dated July 18, 1973 covering a proposed Outer Continental Shelf oil and gas general lease sale of 159 tracts of submerged lands offshore Mississippi, Alabama, and Florida. As you know, the Commission is and has for some time been actively directing its attention and efforts toward those regulatory actions which will improve the current imbalance between natural gas supply and demand. The Commission has taken a number of steps to stimulate exploration and development in addition to other actions designed to bring market demands more nearly in line with available supplies. We view the proposed lease sale as having the potential for improving the supply situation for both oil and natural gas. We recognize that there may be potentially adverse environmental effects to be considered and evaluated. It is important that a balanced approach be followed which will achieve needed resource development and the raw energy supplies to meet the nation's social and economic objectives while at the same time giving full consideration to environmental interests.

The Commission staff has reviewed the draft environmental statement and their comments are attached for your consideration. Based upon an evaluation of these comments, we concur with the conclusion that a balancing of the national interests supports conducting the proposed lease sale.

Sincerely,

John N. Nassikas
Chairman

Enclosure:

Staff Comments on Draft Environmental
Statement dated July 18, 1973.

FEDERAL POWER COMMISSION

STAFF COMMENTS
ON

DRAFT ENVIRONMENTAL STATEMENT
PREPARED BY DEPARTMENT OF INTERIOR
REGARDING PROPOSED 1973 OUTER CONTINENTAL
SHELF OIL AND GAS GENERAL LEASE SALE
OFFSHORE MISSISSIPPI, ALABAMA, AND FLORIDA
OCS SALE NO. 32

DRAFT STATEMENT CIRCULATED PURSUANT
TO SECTION 102(2)(c) OF NATIONAL
ENVIRONMENTAL POLICY ACT OF 1969

Washington, D. C.
August 16, 1973

Comments on Draft Environmental Statement

The Bureau of Land Management, United States Department of the Interior circulated for comments a draft environmental statement dated July 18, 1973, covering a proposed Outer Continental Shelf oil and gas general lease sale of 159 tracts of submerged lands offshore Mississippi, Alabama, and Florida. The lease sale area under consideration comprises 886,458 acres and includes tracts extending from the Mobile Area and the Mobile South Area east through the Pensacola South Area southeast to the Apalachicola Area, the Tarpon Springs Area, and the Tampa Area (as indicated in Appendix B of the statement). The tracts range from 15 to 96 statute miles from shore in water depths that range from 65 to 600 feet.

All of the tracts are anticipated to have both oil and gas potential and it is estimated that the proposed leases will ultimately produce between 2.0 - 3.2 billion barrels of oil and 2.4 - 3.9 trillion cubic feet of gas. It is estimated that the above described reserves, in the proposed leases, may produce 360-590 thousand barrels of oil per day and 0.45 - 0.70 billion cubic feet of gas per day by the sixth year after leasing.

The following comments on the draft environmental statement are arranged according to the format of the statement.

I. Description of the Proposal

It would be helpful if the draft environmental statement were to include the approximate percentage of the tracts that will be primarily gas productive, the percentage anticipated to have both oil and gas, and the percentage that will be primarily oil productive. In addition, it is suggested that the entire section discuss more specifically the deteriorating gas and oil supply situation since this section is an introduction to the statement. Adequate discussion and tables were provided for future projections, however, the statement should include historical statistics to serve as a background. The current imbalance between oil and gas supply and demand cannot be overemphasized. Reserve data supplied by interstate pipeline companies in their FPC Form 15 Reports have indicated declines of proven gas reserves of 3.1, 7.4, 14.0, and 12.3 trillion cubic feet for the years 1968, 1969, 1970, and 1971, respectively (1972 data not yet available). This

is a total decline of 18.5 percent below the peak level of 198.1 trillion cubic feet of proven gas reserves at year-end 1967. Data from the American Gas Association, which includes information on reserves to both interstate and intrastate companies, gives similar indications of declining reserves. 1/ This decline in proven natural gas reserves since 1968 is due to new additions to reserves not being sufficient to offset production. This imbalance between reserve additions and production has resulted in a decline in deliverability. 2/ As of year-end 1970, based on dedicated interstate reserves and estimates of future market requirements, it is indicated that a 10 percent decline in projected deliveries would occur in the fifth year, or 1975. However, assuming a continuation of present trends of declining reserve additions and increasing market requirements, a 10 percent deficiency in the ability of interstate pipeline companies to meet requirements on an annual basis would occur at an even earlier date. It is suggested that future projections for the Mississippi, Alabama, and Florida region be included under the heading of "Location and Reserves" on Page 22.

The Potential Gas Committee 3/ estimates that, as of December 31, 1972, there is a potential natural gas supply of 36 trillion cubic feet in the Mississippi-Alabama-Florida offshore areas (including the Florida Atlantic Coast). This represents almost 16 percent of the potential estimated for the total offshore area of the lower 48 states. Therefore, the development of this area could play an important role in helping our nation meet the growing demand for natural gas.

1/ American Gas Association, Reserves of Crude Oil, Natural Gas Liquids, and Natural Gas in the United States and Canada and United States Productive Capacity as of December 31, 1972.

2/ Federal Power Commission, The Gas Supplies of Interstate Natural Gas Pipeline Companies, 1971, Washington, D. C.

3/ The Potential Gas Committee is sponsored by the Potential Gas Agency of the Colorado School of Mines, and is composed of members from the transmission, distribution and production segments of the gas industry, along with members and observers from state and Federal agencies, Canada, Mexico and the National Association of Regulatory Utility Commissioners.

The Future Requirements Committee 4/ has projected steadily increasing requirements in the three-state area. Requirements are projected at 1.4, 1.7, and 2.2 trillion cubic feet in 1975, 1980 and 1985, respectively. The annual rate of growth of this demand is 5 percent, which results in 1985 requirements at twice the level of 1970 consumption of 1.1 trillion cubic feet. These increasing demands point to the urgency of developing the gas resources believed to exist in the Mississippi-Alabama-Florida offshore areas. These supplies are even more valuable when consideration is given to their close proximity to the market place. In contrast to the bulk of supply which now comes from the South Central states (Louisiana, Mississippi and Texas), a distance of several hundred miles, any gas forthcoming from the proposed acreage would be transported at most 100 miles to onshore delivery points. Significant development of this area would therefore not only help meet future projected demand, but also keep the average price of gas down due to low transportation costs.

II. Description of the Environment

A map or chart of the region should be included showing the approximate locations of the artificial reefs described on Page 173. As only three jurisdictional gas pipelines (diameters of 24-inch, 16-inch, and 12-inch) extend into Florida, it would follow that a potential exists for additional facilities to be installed to transport and process the production from the tracts in the Pensacola South Area, the Apalachicola Area, the Tarpon Springs Area, and the Tampa Area. Therefore, it is suggested that more detailed discussion and maps of the upland areas be provided.

4/ The Future Requirements Committee is sponsored by the Future Requirements Agency, Denver Research Institute, University of Denver, and is composed of members from the gas producing, pipeline and distribution industry, observers from state and Federal regulatory bodies, American Gas Association, American Petroleum Institute, Independent Natural Gas Association of America and the National Association of Regulatory Utility Commissioners.

A. Minor Comments

1. The title under Figure 21 on Page 108 should read "Surface salinities (parts per thousand) in the winter of 1962." rather than "(parts per million)"
2. On Page 140 in the nineteenth line, "neried" should be nereid.
3. On Page 146 under the heading "Scientific Family Name", "Engranlidae" should be Engraulidae.

III. Environmental Impact of the Proposed Sale

On Page 278, it is stated that "Although specific pipeline routes have not yet been chosen, it is known that none will cross large expanses of marsh or mangrove swamps". A map showing the four probable pipeline corridors should be included in the statement to help substantiate this point.

In addition, a detailed discussion describing all offshore and onshore pipelaying methods that would be used should be included in either this section or in Section I.F.4. Provide a study of the physiography, topography, hydrology, and hydrography of the marshes of Mississippi, Alabama, and Florida compared to the marshes of Texas. If this region is similar to Texas, then the environmental impact resulting from pipeline construction would be similar, as you suggest. If this region is not similar to Texas, but similar to the marsh ecostructure of Louisiana, the environmental impact could be long-term especially if the flotation or canal method of pipeline construction were used. 5/

It is suggested that a map or chart be provided to indicate the environmental impact factor number of each tract as discussed on Pages 327-334.

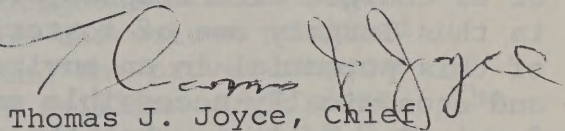
5/ McGinnis, John T., R. A. Ewing, C. A. Willingham, S. E. Rogers, D. H. Douglass, D. L. Morrison, 1972. Environmental Aspects of Gas Pipeline Operations in the Louisiana Marshes. Battelle, Columbus Laboratories, Columbus, Ohio. Pages 3.2-3.7.

VII. Irreversible and Irretrievable Commitment of Resources

Abandoned pipelines should be considered as an irreversibly committed resource. In addition, if the flotation method of pipeline construction were used in the marsh areas, this could result in the irreversible loss of land because the canals created using this method are permanent and cannot be backfilled.

Conclusion

The National Environmental Policy Act stresses the need for a balanced approach toward resource development and protection of the environment. The review of the draft environmental statement leads staff to believe that the proposed lease sale would provide such a balance between the need for natural gas and oil, the environmental and other benefits to be derived from their availability for consumption, and the minimal adverse environmental effects that might, but not necessarily will, occur in the local areas contiguous to the leases. Therefore, the 1973 Outer Continental Shelf Oil and Gas General Lease Sale Offshore Mississippi, Alabama, and Florida warrants approval, and should be implemented as scheduled.


Thomas J. Joyce, Chief
Bureau of Natural Gas

FEDERAL POWER COMMISSION
WASHINGTON, D.C. 20426

IN REPLY REFER TO:

SEP 4 1973

Honorable Rogers C. B. Morton
Secretary of the Interior
Washington, D. C. 20240

Dear Mr. Secretary:

The persisting unfavorable trends in domestic natural gas supply have sustained the Federal Power Commission's concern for the inability of our physical resources to be developed into marketable energy forms to meet the increasing demands being placed upon them. Because the problems developing in this area at the present time appear to be largely those of inadequate resource development, however, this situation appears somewhat amenable to improvement. Significant natural gas resources remain to be developed in several regions of the Nation. The task facing those of us charged with responsibilities in the energy sector is thus largely one of fostering the timely development of this potential in an environmentally compatible and economically accessible manner. The Federal Power Commission believes that the proposed general lease sale of 159 Outer Continental Shelf tracts should be conducted as proposed in December 1972, and the natural gas potential of the area developed.

The environmental problems associated with additional exploration and development work in the offshore Eastern Gulf of Mexico tracts proposed for leasing must receive appropriate attention so as to

alleviate, insofar as possible, the hazards attendant to these operations. It must be recognized, however, that the scope of the environmental impact of the offshore activities considered extends far beyond those effects which may be manifested in the immediate marine and onshore areas. Major environmental and energy benefits will accrue to other areas of the Nation through the availability of much needed clean fuel supplies from this area of significant resource potential. We urge a consideration of the possible benefits and detriments of the proposed leasing actions in this broad sense.

Data on interstate gas reserves and deliverability have been collected by the Federal Power Commission through annual Form 15 reports since 1963. Over that period of time, as shown in the following table on the next page, the reserves to production ratio has declined from 20.2 to 11.4 in 1971. In 1972, natural gas reserves for the contiguous states, as reported by the American Gas Association, decreased for the fifth consecutive year to 234.6 trillion cubic feet, 18.9 percent below the peak level of 289.3 trillion cubic feet in 1967. Total U. S. reserve additions in the contiguous states have amounted to less than half of the volume produced during the last five years and the proven reserve inventory has shrunk by 54.7 trillion cubic feet. The reserve to production ratio which stood at 18.9 in 1963 has now dropped to 10.5.

Pipeline companies are experiencing increasing difficulty in contracting for new gas supplies necessary to adequately serve present customers and provide service to all new consumers who are requesting it. Reports filed by interstate pipeline companies indicate

COMPARISON OF A. G. A. 1/ DATA &
FORM 15 2/ DATA
(Volumes in Trillions of Cubic Feet)

<u>END OF YEAR RESERVES</u>			<u>RESERVE TO PRODUCTION RATIO</u>	
<u>A.G. A.</u>		<u>FORM 15</u>	<u>A.G.A.</u>	<u>FORM 15</u>
1963	274.5	188.5	18.9	20.2
1964	279.4	189.2	18.3	18.9
1965	284.5	192.1	17.5	18.5
1966	286.4	195.1	16.4	17.5
1967	289.3	198.1	15.7	16.8
1968	282.1	195.0	14.6	15.5
1969	269.9	187.6	13.1	14.0
1970	259.6	173.6	11.9	12.3
1971	247.4	161.3	11.3	11.4
1972	234.6	N.A.	10.5	N.A.

1/ American Gas Association, Reserves of Crude Oil, Natural Gas Liquids and Natural Gas in the United States and Canada, as of December 31, 1972.

2/ Federal Power Commission, The Gas Supplies of Interstate Natural Gas Pipeline Companies, 1971.

that firm requirement deficiencies have been increasing steadily from about 62 billion cubic feet during the 1970-71 winter to a projected level of 670 billion cubic feet this coming winter.^{1/} Curtailments of both firm and interruptible gas service by the major interstate pipeline companies are becoming increasingly frequent and of longer duration, with seriously adverse economic results, such as switching to more costly, less desirable fuels and a slowing effect on industrial growth in some parts of the Nation. Also in many areas, new gas service to private homes is being denied. Further evidence of the worsening domestic natural gas supply position is seen in increasing applications to this Commission to import Canadian and other foreign gas and in other applications to synthesize natural gas substitutes from natural gas liquids, naphtha and coal.

The Future Requirements Committee ^{2/} has estimated that in 1975 only 86 percent of the anticipated national requirement for natural gas can be met from currently contracted or reasonably assured supplies. The Federal Power Commission staff draws similar conclusions with respect to the supply-demand balance and additionally forecasts anticipated supply deficiencies of 9.5, 13.7 and 17.1 trillion cubic feet in 1980, 1985 and 1990, respectively.^{3/}

^{1/} The companies experiencing firm requirement deficiencies are Algonquin Gas Transmission Co., Arkansas Louisiana Gas Company, Cities Service Gas Co., Columbia Gas Transmission Corp., Consolidated Gas Supply Corp., El Paso Natural Gas Co., Mississippi River Transmission Corp., Natural Gas Pipeline Co. of America, Northern Natural Gas Co., Panhandle Eastern Pipe Line Co., Texas Eastern Transmission Corp., Transcontinental Gas Pipe Line Corp., Transwestern Pipeline Co., Trunkline Gas Co., and United Gas Pipe Line Co.

^{2/} The Future Requirements Committee is sponsored by the Future Requirements Agency, Denver Research Institute, University of Denver and is composed of members
(Continued on next page)

The Federal Power Commission has acted on many fronts with regard to meeting its regulatory responsibilities to foster and facilitate an improvement in the gas supply situation. On April 11, 1973, the FPC issued a notice of proposed rulemaking which requested comments on a national new gas rate, and the Commission intends to issue an order concerning this matter in a timely manner. The Commission, on August 3, 1972, issued Order No. 455, prescribing an optional procedure for certificating new sales. Under this procedure the Commission may authorize sales at rates above existing area rate ceilings if such rate is required by the public convenience and necessity.

The development of the resources needed to meet demand is, however, responsive to many factors other than the wellhead prices set by the Federal Power Commission for sales in interstate commerce. Some of these factors include the industry's level of technology as it relates to offshore operations; tax policies; the relative attraction between domestic and foreign investments; and leasing policies relating to Federal Domain lands. Of these various factors the leasing policy is a crucial one, for unless promising drilling sites are made available to the oil and gas industry, all other efforts to stimulate exploration and development will not achieve their full potential.

2/ from the gas producing, pipeline, and distribution industry, observers from state and Federal regulatory bodies, American Gas Association, American Petroleum Institute, Independent Natural Gas Association of America and the National Association of Regulatory Utility Commissioners.

3/ Federal Power Commission, Bureau of Natural Gas, National Gas Supply and Demand 1971-1990, Staff Report No. 2, February 1972.

The Potential Gas Committee^{4/} estimates that, as of December 31, 1972, there is a potential natural gas supply of 60 trillion cubic feet in the Mississippi-Alabama-Florida area as a whole, and that 36 trillion cubic feet, or 60 percent of this amount, lies in the offshore areas (including the Florida Atlantic Coast). Thus, the total offshore potential for this area comprises almost 16 percent of that estimated for the total offshore area of the lower 48 states. Therefore, the development of this area could play an important role in helping our Nation meet the growing demand for natural gas.

The current absence of viable fuel supply alternatives which can provide the same economic and environmental advantages provided by natural gas accentuates the necessity for an orderly and controlled expansion of leasing opportunities in the Gulf of Mexico area. It will be several years before currently anticipated supplemental gas supplies in the form of imported liquefied natural gas, gas from coal, or gas from Alaska can provide any significant portion of our energy needs. There are attendant national security and balance of trade considerations inherent in many of the supplements to be imported to the United States. In the interim we must depend on the optimized development of our resource potential to adequately provide for the energy needs of the Nation.

In considering the possible benefits to be derived from the proposed lease sale, consideration must also be given to the environmental implications of such sale. The National Environmental Policy Act of 1969 stresses the need for encouraging harmony between man and his environment. The pursuit of this objective requires the evaluation of a multitude of environmental factors extending from the local areas where the development

^{4/} The Potential Gas Committee is sponsored by the Potential Gas Agency of the Colorado School of Mines and is composed of members from the transmission, distribution and production segments of the gas industry, along with members and observers from state and Federal agencies, Canada, Mexico and the National Association of Regulatory Utility Commissioners.

and production activities take place to the ultimate markets where the resource is consumed. The availability of natural gas for residential, commercial, and industrial purposes is an important consideration in any rationally conceived plan to meet energy needs in an environmentally acceptable manner. Because of its clean burning characteristics, natural gas is a premium fuel in the battle to preserve and protect the quality of the air man breathes. The state of present technology still leaves much of the burden for protecting the atmosphere to the utilization of low sulfur fuels such as natural gas.

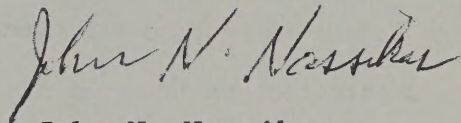
Energy is the essential ingredient which this Nation must have to convert raw resources into the products and services that constitute our high standard of living. The growth of our national economy supporting our technologically advanced civilization is in part dependent on continued adequate supplies of energy.

A number of supplemental supplies of gas have been identified. However, the problem of gas supply is not one of selection from alternate sources, but one of development of all sources in an environmentally acceptable manner. The national gas shortage is at a point where even full development of our potential gas resources may not satisfy currently projected levels of demand. The proposed lease sale is in conformance with the goal of developing our indigenous energy supplies to achieve the optimum degree of energy self-sufficiency.

A primary purpose of the National Environmental Policy Act is to "attain the widest range of beneficial uses of the environment without degradation, risk to health and safety, or other undesirable and unintended consequences." The Act also calls upon the Federal government to use all practicable means to ... "achieve

a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities." If we are to meet this obligation, the Nation's consumers must be assured an adequate supply of energy. The Federal Power Commission feels that the proposed lease sale is an important, indeed imperative, element in providing that assurance, and that the public interest can best be served by holding this proposed lease sale at the earliest possible time.

Sincerely,

A handwritten signature in dark ink, appearing to read "John N. Nassikas". The signature is fluid and cursive, with the first name "John" being more prominent and the last name "Nassikas" written in a continuous script.

John N. Nassikas
Chairman

j. Department of Commerce (DOC)

The DOC submitted comments and provided additional information concerning matters related primarily to commercial fishing.

Disposition

Para. #1 - Vol. 1, Sec. I.B.&C. presents generic background information on the overall tentative five-year leasing schedule. The purpose for inclusion is to provide a background setting in which the MAFLA sale emerges as a specific proposal constituting a major Federal action. With exception of Vol. 1, Sec. I.B.&C. all of the environmental statement concerns the specific MAFLA sale proposal.

Para. #2 - Our proposal involves the leasing of offshore submerged lands in Federal areas of the OCS. If these leases issue then eventually certain types of activities will result within the coastal zone. These activities are identified and discussed in the FES. The CZMA and management plans developed by states provides a forum wherein coordination and cooperation between Federal and State authorities for actions affecting the coastal zone can take place giving appropriate attention to national needs on the one hand and individual State needs on the other. (See our response to page 27 of the Florida Audubon Society's comments concerning the CZMA - Sec. IX.B.4 of this volume.).

Para. #3 - We agree that stringent requirements above and beyond those automatically provided as a consequence of OCS operating orders and Regulations wherever feasible, may help reduce or eliminate potential hazards peculiar to a specific sale

or set of circumstances. BLM has exercised this option in past sales and has again done so for this sale by means of special stipulations. (See especially Vol. 2, Sec. IV.C.&D.).

In May 1971 the Geological Survey requested NASA's Mississippi Test Facility to propose a plan by which the applicability of NASA procedures for quality control and hazard analysis to offshore oil and gas operations might be determined. A final report titled "Applicability of NASA Contract Quality Management and Failure Mode Effect Analysis Procedures to the USGS Outer Continental Shelf Oil and Gas Lease Management Program" was released in November, 1971. (See Vol. 5, Attachment D for a summary of the recommendation issuing from the report and GS's response). Since issuance of the NASA Report, system analyses were performed on thirteen installations in the Gulf of Mexico under two GS contracts. These studies are currently being evaluated with the objective of possible adoption into the lease management program in connection with work being done in this area by the committee on standards and specifications. (See Vol. 1, Sec. I.H.).

Para #4 - We do not have data concerning chronic low level oil pipeline leaks. Our knowledge in this area suffers from lack of assignment of single agency responsibility for inspection, monitoring and recording of all pipeline leaks. (See

Vol. 2, Sec. IV. C. for a description of agencies having authority or responsibility for offshore pipelines). Also see the aforementioned section of the FES which expresses our concern and outlines the steps we are taking in an effort to provide adequate control, supervision and inspection of offshore pipelines. Effective October 1, 1972, the Office of Pipeline Safety, Department of Transportation was authorized to compile data on pipeline spills of 50 bbl. or more. However, gathering lines are exempt and no data has yet been collected for common carrier lines.

Para. #5 - We have incorporated the information in the FES.

Para #6 - We have plotted the coral reef reported by DOC and there are no tracts in this proposed sale within 15 miles of the area. If a pipeline corridor route should pass through this area then verification of this reef will be undertaken and efforts will be made to protect and preserve all areas of unique environmental value. (See Vol. 2, Sec. IV. C. concerning measures to be taken concerning pipeline corridor routings).

Para. #7 - See Vol. 2, Sec. III. D. and the Table in that section prepared to include value per pound of shrimp taken by depth of water.

Para. #8 - The impact upon marine life has been added.

Para. #9 - We agree that additional protection of the rich and unique coral community and valuable fishing resource of the Florida Middle Grounds should be provided if possible. We have proposed a stipulation to accomplish this goal. (See Vol. 2, Sec. IV. D.1.).

Para #10 - Adjustment of the matrix tables to reflect the importance of the Middle Ground area as a fishery has been made.

Para. #11 - We know of no areas so heavily oiled by chronic pollution as to constitute an irreversible or irretrievable commitment of fish and wildlife resources. We have noted that the continual run off of brines in certain areas of Louisiana's marshland may have created a sterile situation possibly resulting in an irreversible and irretrievable commitment of fish and wildlife resources. OCS platforms result in commitment of acreage for the life of the platforms but once the platforms are removed the area is retrievable. Also, we are unaware of any irreversible or irretrievable commitment of fish and wildlife resources resulting from toxic heavy metals introduced into the environment from either drilling or pipeline excavations associated with OCS operations. The only commitment of this nature in our estimation is the

irretrievable and irreversible removal of habitat resulting from location of onshore facilities required to support offshore production. Although the areas of habitat removed per unit are small, incrementally they take on added significance and importance in the coastal zone.

We are unable, at this time, to conclude as the Commerce Department has asked us to "that an irreversible or irretrievable commitment of fish and wildlife resources could also occur in areas frequently subjected to chronic low level oil leaks from pipelines or to heavy metal concentrations from drilling operations." Over 25 years of past experience with oil and gas production in the Gulf of Mexico has failed to provide evidence to support that conclusion.



OFFICE OF THE ASSISTANT SECRETARY OF COMMERCE
Washington, D.C. 20230

September 12, 1973

Mr. George L. Turcott
Acting Director
Bureau of Land Management
U. S. Department of the Interior
Washington, D. C. 20240

Dear Mr. Turcott:

The draft environmental impact statement for a proposed Outer Continental Shelf Oil and Gas General Lease Sale - Offshore Mississippi, Alabama and Florida, which accompanied your letter of July 18, 1973, has been received by the Department of Commerce for review and comment.

The statement has been reviewed and the following comments are offered for your consideration.

1. Page 5, paragraph 2 states that an environmental statement will be prepared for each lease or sale that occurs in the proposed five year schedule, thus, this document seems to be a generic background document rather than being represented as draft environmental impact statement.
2. The Coastal Zone Management Act and the responsibilities under this Act of persons proposing actions affecting the coastal zone should at least be mentioned. Specific items are: compatability with state coastal zone planning, and future needs arising from outer continental shelf lease or sale.
3. The draft environmental impact statement contains a thorough discussion of accidental spills and hazards associated with OCS oil and gas development and production. However, even with the measures already taken to mitigate such accidents as noted in the draft environmental impact statement, it would seem reasonable that the BLM should insist on even more stringent requirements toward elimination of all possible sources of

accident producing conditions. Even though the aggregate figures indicate a low percentage occurrence, accidents can and do have large local effects. The draft environmental impact statement should include a "failure type" analysis which would be locally based and not be based on national or even regional numbers.

4. I.F.4, page 58 - This section would benefit from a discussion of chronic low level oil pipeline leaks.

5. II.F.2.6, pages 173-174 - This section should clearly indicate that although offshore oil and gas platforms may attract forage and predatory fish, thereby tending to improve fishing success, the population size of these species is not necessarily increased as a result of the attraction of fish to these structures.

Figure 30-h. Boca Ciega Bay should be shown as an aquatic preserve.

Figure 31 - The map designating billfish habitat is incorrect. The entire Gulf of Mexico should be indicated as billfish habitat. In addition, the northern Gulf billfish fishery should be revised according to the attached maps. (From Rivas, Luis R. 1973. Big Game Fishing in the Gulf of Mexico during 1972. National Marine Fisheries Service, Gulf Coastal Fisheries Center, Panama City, Florida (18 pages plus tables and figures, mimeo)).

Page 214 - A literature citation should be provided in the bibliography for the publication by Klima and Wickham. (Klima, Edward F. and Wickham, Donald A., 1971. Attraction of Coastal Pelagic Fishes with Artificial Structures. Transactions of the American Fisheries Society, Volume 100, pages 86-99).

6. III.B - Environmental Impact of the Proposed Sale - Impact on the Living Component of the Environment. Pages 245-258 - A live coral reef reportedly exists SSE of Cape San Blas in 20-23 fathoms (near lat. $28^{\circ} 50' N$, long. $84^{\circ} 40' W$). The existence of this reef should be verified and its proximity to tracts under consideration for leasing should be determined and described. If the reef is near any of the tracts, we suggest that measures that will be taken to avoid damage to the reef be described in the final statement.

7. III.D.2 - Impact on Commercial Fisheries. Creation of obstructions on the Sea Floor that Cause Damage to Trawling Nets.

Page 288 - Because of the trend to deeper fishing operations, this section should point out that shrimp taken in these deep waters, being larger in size, are more valuable. For example, in 1970, for shrimp caught off the coast of Louisiana and Mississippi (see attached table), the value per pound ranged from \$0.27 to \$0.59 for those taken in inshore waters and out to the 120-foot depth contour, whereas values for those taken in waters deeper than 120 feet ranged from \$0.61 to \$1.00 per pound.

8. III.F - Conflict with Military Uses of the Continental Shelf.

Page 294-299 - The impact on resources of possible explosions resulting from the interaction of military and oil exploration activities should be discussed.

9. III. I. 4 - A Matrix Analysis of Some Possible Adverse Impacts on the Environment and Related Uses.

Analytical Procedures

Page 317-328 - The Florida Middle Grounds fishing area is located in the vicinity of latitude $28^{\circ} 11'N$ - $28^{\circ} 45'N$, long. $84^{\circ} 00'W$ - $84^{\circ} 25'W$, which closely coincides with the location of the Apalachicola South leasing area (see attached chart). Depths in the fishing area vary from about 13 to 25 fathoms, and fishing pressure is reported to be heavy during the summer for grouper and snapper (Moe, Martin A., Jr., 1963. A survey of Offshore Fishing in Florida. Professional Papers Series, Number Four. Florida State Board of Conservation Marine Laboratory, St. Petersburg, Florida. 117 pages). Because of the importance of the Middle Grounds area for both sport and commercial fishing, perhaps some provision should be made for careful scrutiny of those tracts within the vicinity of this area (Nos. 114-142) even though the relative environmental impact factor for these tracts is less than 50.

In addition, the environmental impact factor for all of the 159 tracts in this proposed sale should be adjusted to consider the amended billfish sport fishing areas shown in the attached charts.

10. III.J.7-8, Recapitulation of the Matrices - Commercial Fishing and Sport Fishing.

Page 331-332 - Some revision of these sections may be necessary if adjustment of environmental impact factors for sport or commercial fishing results in values high enough for additional tracts to qualify for careful scrutiny.

11. VI. - Relationship Between Local Short-Term Use and Maintenance and Enhancement of Long-Term Productivity

Page 396-399 - This section should indicate that chronic low level leaks in oil pipelines may cause a reduction in long-term marine productivity.

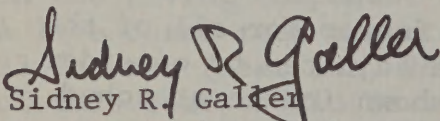
12. VII. C - Irreversible and Irretrievable Commitment of Resources. Fish and Wildlife Resources.

Page 400 - This section should be amended to indicate that an irreversible or irretrievable commitment of fish and wildlife resources and their habitats could also occur in areas frequently subjected to chronic low level oil leaks from pipelines or to heavy metal concentrations from drilling operations.

13. Further assistance and information regarding marine fisheries in the Gulf of Mexico may be obtained from the National Marine Fisheries Service.

Thank you for giving us an opportunity to provide these comments, which we hope will be of assistance to you. We would appreciate receiving a copy of the final statement.

Sincerely,



Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs

Attachments

Table -- Comparison Between the Proposed Area of Sale & Shrimp Fishing and Catches, 1970

Item	Water Depth in Feet for Coastal Louisiana and Mississippi									Totals
	0-30	31-60	61-90	91-120	121-150	151-180	181-210	211-240	+240	
<u>Proposed Sale</u>										
Number tracts	13	11	1	1	5	6	9	18	71	135
Miles from shore	14-25	27-35	42	42	45-86	79-86	85-96	85-110	75-125	
Acres (thous.)	62.6	49.0	5.0	5.0	25.0	25.0	42.5	71.6	333.1	618.8
% of total	10.1	7.9	0.8	0.8	4.0	4.0	6.9	11.5	53.8	
<u>Shrimp Fishing</u>										
Number trips (1,000)	149.7	10.6	2.6	1.8	1.5	1.5	0.5	0.2	0.1	168
%	89.9	6.2	1.5	1.0	0.8	0.9	0.3	0.1	---	
Boat Days (1,000)	70.6	24.3	8.9	7.0	5.9	6.9	2.5	0.6	0.2	126
%	55.7	19.2	6.8	5.5	4.6	5.4	1.9	0.5	0.1	
Catch (in millions of lbs)*1/										
Brown	34.7	4.5	6.3	5.9	5.1	6.9	2.9	1.0	0.2	67.5
White	29.5	14.7	3.7	0.4	0.2	0.04	0.02	0	0	48.6
Other	3.0	0.2	0.08	0.03	0.06	0	0	0	0.02	3.4
Total ^{2/}	67.2	19.4	10.1	6.3	5.4	6.9	2.9	1.0	0.2	119.5
%	56.2	16.2	8.4	5.3	4.5	5.8	2.4	0.8	0.02	
Pounds (per day) per boat	954	799	1,168	930	896	1,010	1,177	1,660	1,234	
Value (millions of dollars)	\$18.0	11.5	5.4	3.5	3.3	4.6	2.0	0.7	0.2	\$49.2
% of value	36.6	23.4	11.0	7.1	6.7	9.3	4.1	1.4	.4	
Value per pound	\$ 0.27	0.59	0.53	0.55	0.61	0.66	0.70	0.70	1.00	

1/ Catch figures are in round or live weights

2/ Includes inshore catch of 45 million lbs.

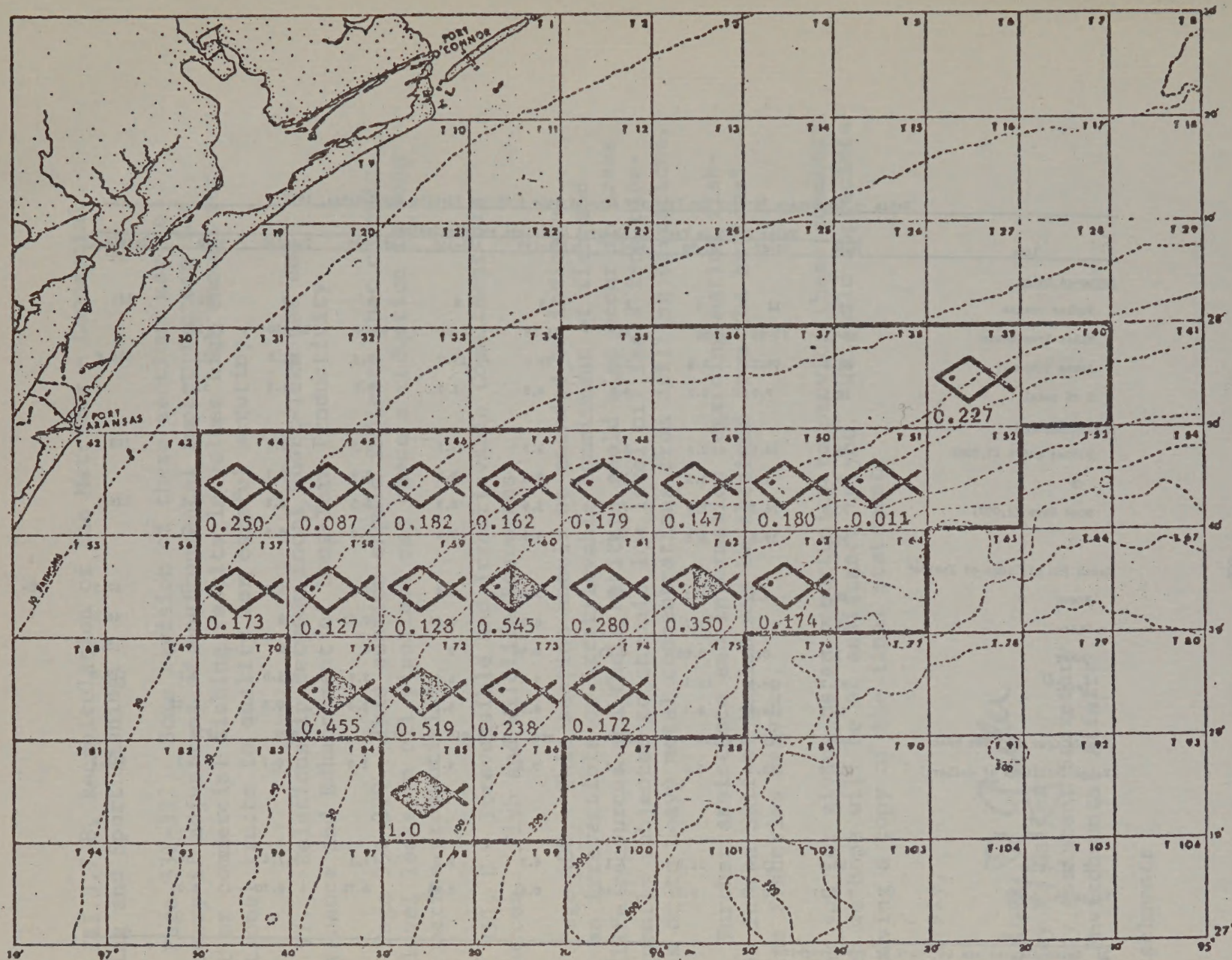
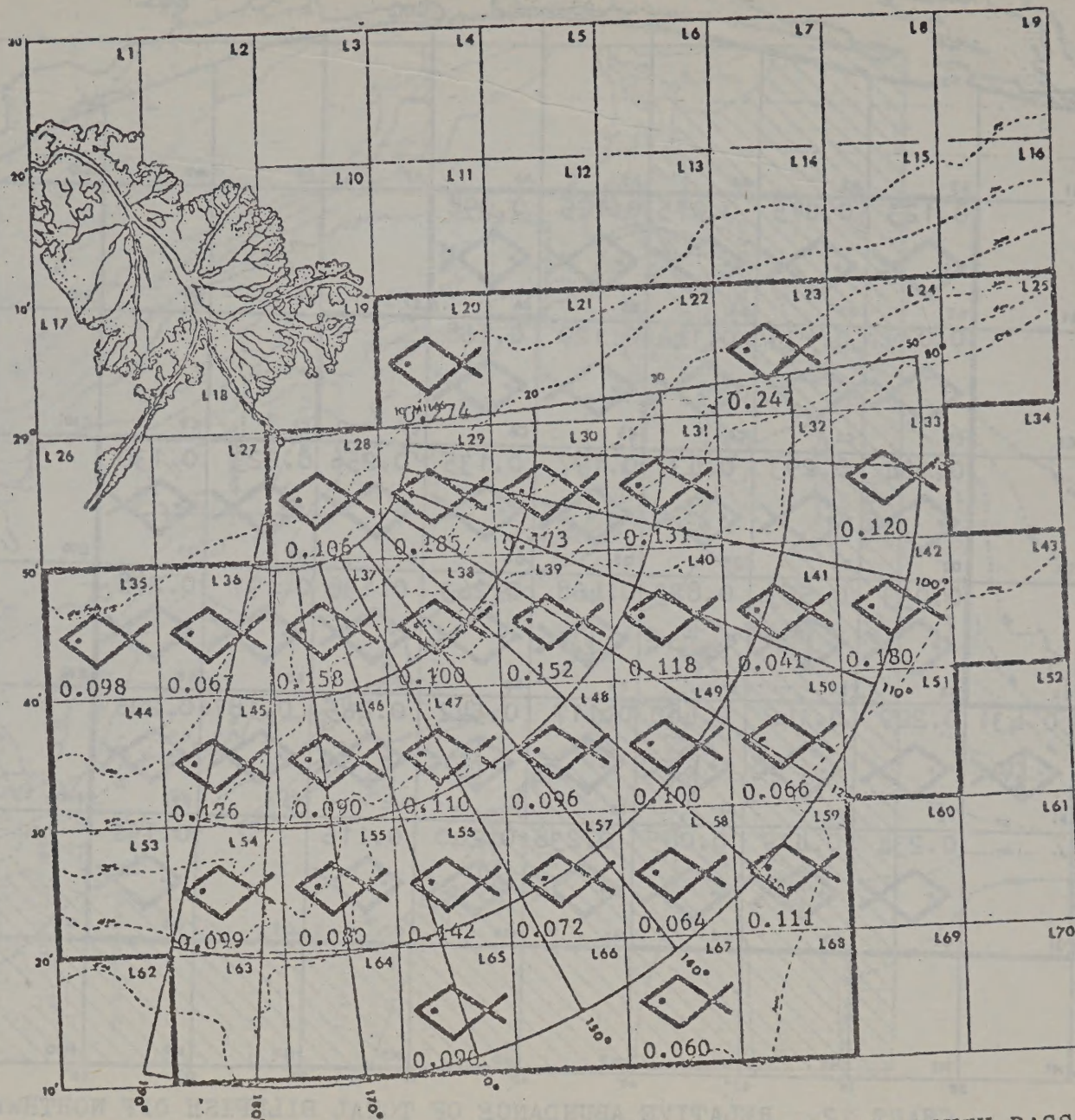


CHART 4. RELATIVE ABUNDANCE OF TOTAL BILLFISH OFF PORT ARANSAS BY TEN-MINUTE SQUARES FOR ENTIRE SEASON OF 1972.



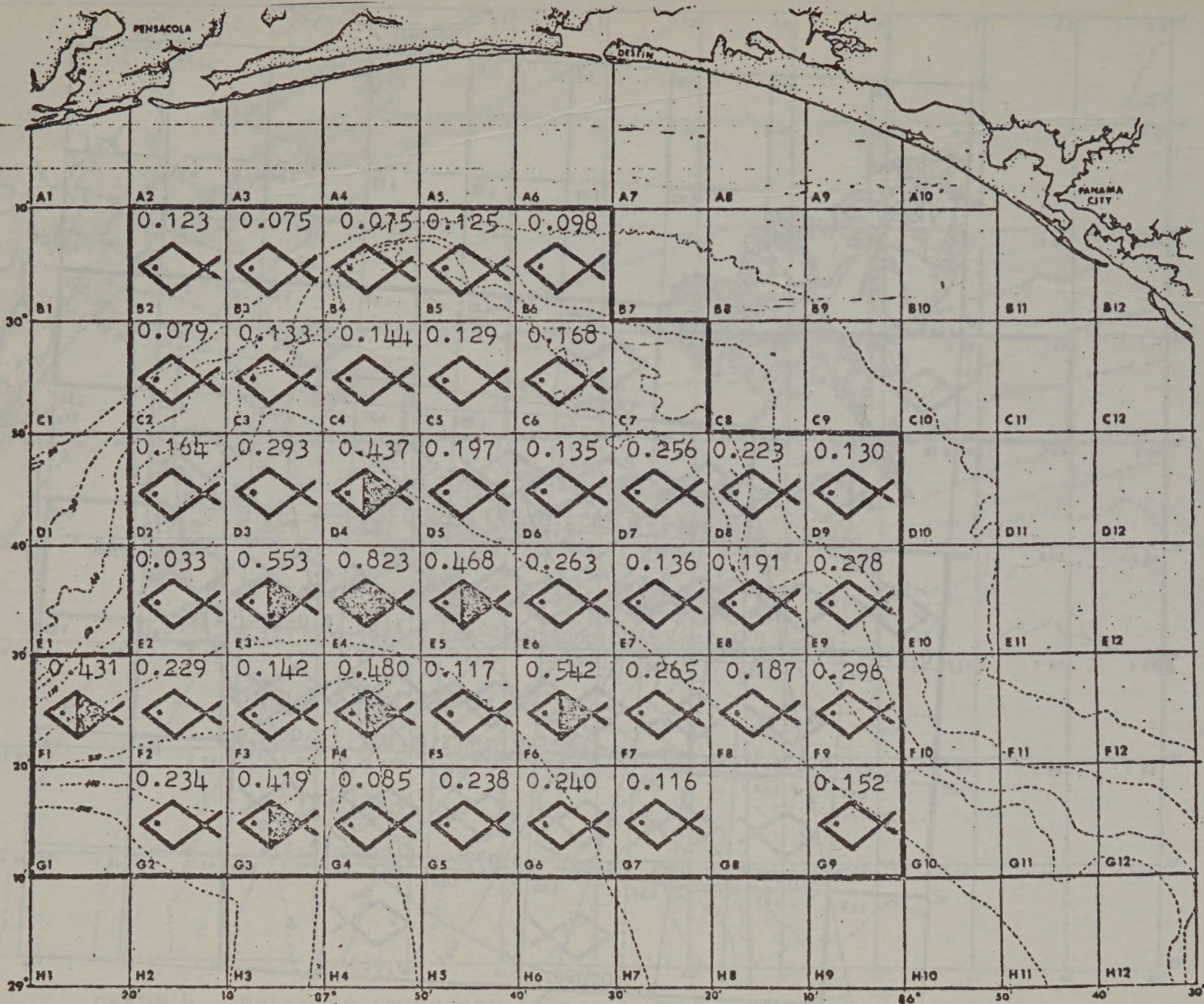
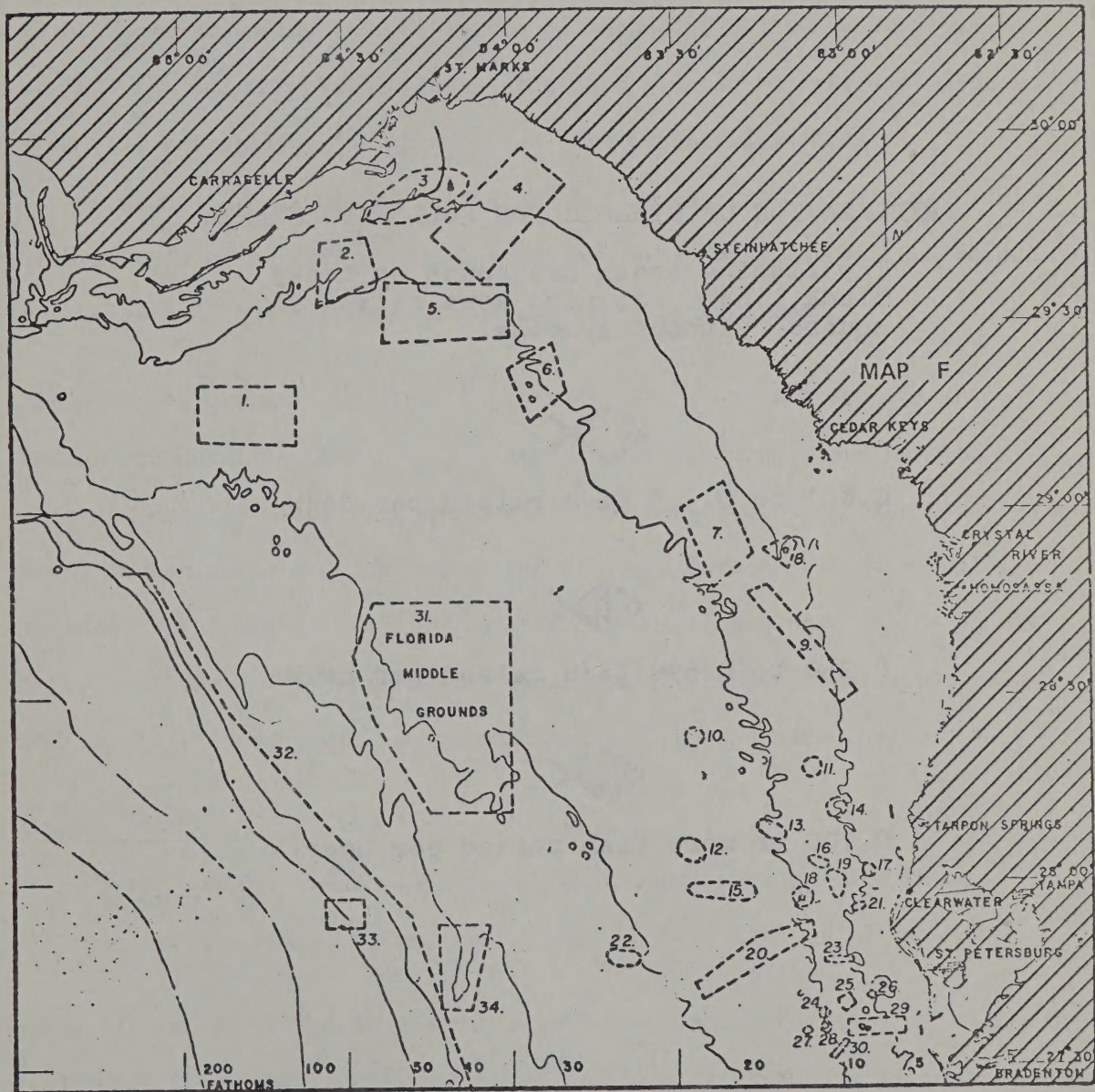


CHART 12. RELATIVE ABUNDANCE OF TOTAL BILLFISH OFF NORTHWEST FLORIDA BY TEN-MINUTE SQUARES FOR ENTIRE SEASON OF 1972.



EXPLANATION OF SYMBOLS FOR FOLLOWING CHARTS

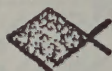
The fishing areas are bound by heavy black lines. No fish were raised in squares without symbols.



0.001 to 0.349 fish raised per hour



0.350 to 0.699 fish raised per hour



0.700 or more fish raised per hour

k. Environmental Protection Agency (EPA)

The EPA went to considerable effort to review the DES and to suggest alternatives, study plans, stipulations, and detailed steps to be taken to improve the FES. The consensus of EPA's review seems to be that the DES has utilized available impact data and reflects knowledge from relevant studies, but ecological data essential to determine the environmental impact of OCS activities in the eastern Gulf are not available at this time. EPA suggests that this data "must be obtained before the impacts of the proposed action can be fully analyzed".

EPA's review comments consist of 8 parts: (1) Cover Letter; (2) Introduction to Detailed Comments; (3) Measurement of Impacts and Lack of Information; (4) Monitoring Strategies; (5) Requirement for the Use of Known Technologies and the Sequencing of Operations to Mitigate Pollution Potential; (6) EPA Application of Effluent Guidelines and Permits in the Territorial Sea; (7) Data Presentation; and (8) Specific Comments. Each of these parts and their recommendations will be discussed below.

Disposition

(1) Cover Letter: Last sentence of pg. 1 and top of pg. 2 - This alternative has been incorporated in Vol. 3, Sec. VIII. A. 2. b.

Para. 2, pg. 2 - A specific study plan for acquiring the data EPA indicates is needed to evaluate potential impacts from this sale has been incorporated in Vol. 1, Sec. I. H. 5. of the FES. It is not, however,

considered as an alternative as EPA suggested it might be, but rather it is presented as a Departmental commitment to implement these study efforts concurrently with initial pre-production activities in the area of this proposed sale. Therefore, if the decision is made to proceed with this proposed sale then included in that decision will be the commitment to move ahead on the study program.

Last para., pg. 2, item (1) and top of pg. 3, item (2) - These Gulf-wide studies are part of our current research and study program. In addition, we have proposed several inhouse and contract studies in our FY '75 budget pertaining to research in existing lease areas.

Para. 2, pg. 3 - See Vol. 1, Sec. I. H. 5 of the FES where it is stated we will coordinate our study program proposal with the Interagency Committee for Marine Environmental Prediction.

Para. 3, pg. 3 - See Vol. 2, Sec. IV. C. & D. for special stipulations suggested for application to tracts in this proposed sale.

(2) Introduction: No comments made in this section require specific response.

(3) Measurement of Impacts and Lack of Information: The studies (four in all) suggested by EPA were considered in preparing the study plan presented in Vol.1, Sec. I. H. 5. Additional assistance in this matter was gained in a meeting between BLM and EPA officials. Specific,

detailed study designs have not been completed at this time for each of the phases indicated.

The alternative suggested on pg. 8 concerning withdrawal from this sale proposal all tracts offshore Florida has been incorporated in the FES. (See Vol. 3, Sec. VIII A. 2. b.)

(4) Monitoring Strategies: A monitoring study proposal has been incorporated in the FES. See Vol. 1, Sec. I. H. 5.

(5) Requirement for the Use of Known Technology and the Sequencing of Operations to Mitigate Pollution Potential: Para. 1, pg. 12 - The Department of the Interior is continually examining its OCS leasing and regulatory procedures as well as current industry practices. We have included a section in the FES that attests to some of the issues the Department is examining and indicates some of the measures we are taking in response to these issues (see Vol. 1, Sec. I. H. 2.; Vol. 3, Sec. VIII. C. 4.).

Para. 2, pg. 12 - Plans are being adopted to limit the conditions under which multiple operations may be conducted from a single platform. OCS Order No. 8 is currently being revised to limit multiple operations and these restrictions will apply to workover operations as well as to drilling and production operations.

Para. 1, pg. 13 - We have proposed a lease stipulation restricting barging of oil in Vol. 2, Sec. IV. D. (4). We feel this will accomplish the purpose EPA is recommending.

Para. 2, pg. 13 - See Vol. 2, Sec. IV. C. for a stipulation requiring corridor routes for common carrier pipelines from production areas to shore. See also Vol. 1, Sec. I. H. 5. for additional study efforts which will provide for final establishment of corridor routes.

(6) EPA Application of Effluent Guidelines and Permits in the Territorial

Sea: Pg. 14 - The Department of the Interior agrees that NPDES permits apply to discharges into the Gulf from OCS areas but the Department should be given an opportunity to participate in the establishment of standards or discharge limitations to be applied to OCS activities. See Vol. 2, Sec. IV. D. 7.

(7) Data Presentation: A summary table has been prepared and includes wherever possible all estimated intentional as well as unintentional discharges that could result from this sale. See Vol. 2, Sec. III. A. 4.

(8) Specific Comments:

Pg. 17, DES pg. 31 - This has been substantiated in the FES.

Pg. 17, DES pg. 50 - See Vol. 1, Sec. I. F. 3. c.

Pg. 17, DES pg. 55 - See Vol. 1, Sec. I. F. 3. d. and previous discussion in response to EPA comment on pg. 12, para. 2 of their letter.

Pg. 18, DES pg. 55 - See Vol. 1, Sec. I. F. 4. a. Pressure sensors and flow meters do not perform well in detecting small leaks in long lines of relatively large diameters such as occur in the offshore. Patrols of pipelines offshore is an alternative measure, albeit an unsophisticated one, for detection of small oil leaks. Also see

our response to the Department of Commerce's review comments -
Vol. 4, Sec. IX, B. 1. j., para. 4.

Pg. 18, DES pg. 57 - The sentence referred to has not been included in the FES because of its conjectural nature and questionable application to bottom conditions in most of the area of this proposed sale.

Pg. 18, DES pg. 63 - Loading and offloading of tankers is a matter within the Coast Guard's authority and we do not have data that would support a statement from us that replacing hoses with loading arms would be both desirable or safer.

Pp. 18 & 19, DES pg. 70 - The paranthetical part of the quotation cited "(never closer than three miles from such areas)" has been removed on the basis that it was misleading. This objectionable phrase was not intended to indicate that a three mile buffer zone would insure protection of the areas referred to, rather it was simply a paranthetical statement of fact that no OCS lease tracts can ever be located closer than 3 miles from shore in the case of Louisiana, Mississippi, and Alabama (or 3 marine leagues in the case of Florida or Texas) because this is the limit of Federal authority over submerged lands.

The conclusion that an "oil spill would likely not reach such areas" is EPA's, not ours. We have simply indicated that in over 25 years of leasing submerged lands on the OCS, no oil spill from a Federal lease area has ever penetrated semi-enclosed bays, estuaries or wetlands. Therefore, we believe the probability that this will occur

in the future is low. This conclusion does not relate to oil spills from state offshore production areas, tankers, barges or pipeline sources.

Pp. 19 & 20, DES pg. 88, Fig. 14 - We fail to see what is misleading about our wind rose presentation. We certainly agree with EPA's obvious conclusion "that during times that these winds are blowing towards the shore, there is a greater chance of oil reaching shore-line areas."

Pg. 20, DES pg. 130 - See Vol. 1, Sec. II. E. 1. c.

Pg. 21, DES pp. 209-219 - Data are furnished in Vol. 1, Sec. II. B. 4.

Pg. 21, DES pg. 228 - This information has been incorporated into the FES

Pg. 21, DES pp. 245, 247, 267 and 360 - Appropriate changes have been made to reflect a no dispersant policy.

Pg. 22, DES pg. 252 - We have no factual (i.e., experimental) data on which to base this conclusion. We believe there are none. Instead, we have chosen to use the same logic used by the MIT Offshore Oil Task Group in their description of potential impact on planktonic eggs and larvae - to wit:

"Even assuming the spill kills all the eggs and larvae which rise into it, the total amount of larvae affected is quite unlikely to be large enough to noticeably affect succeeding generations of adult species. Virtually all of the threatened organisms are members of populations which have reproductive characteristics ("r strategists") adapted to sudden environ-

mental changes such as may occur in the surface waters of the open ocean. In addition, most species are very small (microscopic to barely visible) and reproduce for periods of 100 days or more, creating very high replacement rates for any individuals that are killed, whether by predation by fish, oil spills or other causes." Pg. 265, Vol. II. The Georges Bank Petroleum Study, Rep. No. MIT SG 73-5, 1973.

EPA should note that on pg. 252 of the DES we have stated, "It is not likely that significant amounts of oil spilled from platforms would reach most coastal areas, because of the distance from shore, prevailing winds and currents, and clean-up operations.", and not "...oil spills from platforms would not reach coastal and estuarine areas.", as EPA claims. Admittedly, we have no quantitative model on which to base our claim but have relied on the following conditions:

(a) The winds in the eastern part of the sale area are predominantly easterly, affording significant protection to the Florida peninsula. Along the Florida panhandle and Alabama, the winds blow toward shore between 40 and 49 percent of the time, which means that they do not blow toward shore between 51 and 60 percent of the time. Since oil spills are distributed randomly in time, it is therefore less likely than not that winds would blow oil ashore in this area.

It is only in the extreme northwestern part of the sale area that winds are predominantly onshore, blowing toward nearby Mississippi and Louisiana over 60 percent of the time.

(b) Currents: Dr. B. E. Ross of the University of South Florida has studied winds and currents in the Florida portion of our sale area for six years and has reached the following conclusions about the movement of spilled oil:

- Tampa Area - currents to the north at 0.3 mph -
"little risk to Florida shores"
- Apalachicola South tracts - currents to the northwest at 0.3 mph - "little risk to Florida shores"
- Tracts south of Ft. Walton - currents from east to west at the site generally becoming more perpendicular to the coast as land is approached at 0.1 mph -
"moderate risk to Florida shores."

(c) One tract proposed for leasing is 14 miles from the nearest shore. Two are 16 miles, one is 18 miles, and 7 are 19 miles from shore. The rest are 20 or more. In studying the Chevron spill, Sonu, Murray, and Smith of the Coastal Studies Institute noted that the total length of the oil plume seldom exceeded about 15 miles at any given time, indicating the important effect of turbulent diffusion acting on the oil layer. The Texas Instruments study of the Shell Spill showed that a coherent, massive slick apparently could not hold together for more than 15 miles, and all that reached shore was an oil sheen and scattered stringers of a slick.

Generalizing on two Gulf examples, a massive oil spill is apparently limited to somewhere around 15 linear miles, certainly below 20, in extent before it is broken up and partly emulsified by turbulent diffusion. Only 11 of 147 tracts proposed for leasing fall in this range.

(d) While we are acutely aware of the short comings of clean-up equipment, we recognize that techniques are being refined, and that in all but the worst possible sea conditions, a small to significant proportion of spilled oil will be picked up close to the spill site.

Pp. 22-23, DES pg. 253 - At this time we are unable to evaluate the recuperative powers of the estuaries in the area of this proposed sale. We hope the study plan will provide information to correctly evaluate the scope and intensity of chronic oil spills on the ecosystems of these estuaries.

Pg. 23, DES pg. 255 - See Vol. 2, Sec. III. B. 1. a.

Pg. 23, DES pg. 256 - Appropriate changes have been made.

Pg. 24, DES pg. 256 - We have noted in our discussion of impacts on zooplankton (Vol. 2, Sec. III. B. 1. a.) and on planktonic members of the estuarine areas (ibid., 4. a.) that fish larvae are quite sensitive to oil in the water, up to 10-100 times more sensitive than their adult counterparts. We consider fish larvae to be meroplankton: i.e., temporary members of the group of pelagic organisms which have only very weak powers of motility, or because of their size, are incapable of long vertical or horizontal migrations.

We disagree with EPA's classification of fish larvae as nekton, and we feel we are in good company on this point with men such as R. H. Fleming and E. P. Odum.

Pg. 24, DES pg. 257 - The possibility of oil spills from platforms, ships, and barges reaching shorelines and estuaries has been reconsidered in Vol. 2, Sec. III. B. 3. and 4.

Pg. 25, DES pg. 206 - This information has been incorporated in the FES (Vol. 1, Sec. II. G. 1.)

Pg. 26, DES pg. 264 - The appropriate deletion was made.

Pg. 26, DES pp. 269 and 386 - We agree that the null conclusions referred to are unwarranted. We have deleted them from the FES and proposed a series of studies in Vol. 1, Sec. I. H. 5. which will help us evaluate these effects.

Pg. 26, DES pp. 271 and 283 - For the present, lacking conclusive data concerning the impact of drilling muds, the Department has proposed a monitoring program (Vol. 1, Sec. I. H. 5.) that will include an evaluation of the effect of drilling muds on the marine environment. Also see our response below to Florida's Department of Natural Resources (Section IX, B. 2. c. (8) of this volume) comments concerning OCS Order No. 7 and drilling muds.

Pp. 26 and 27, DES pg. 277 - We have researched the literature concerning effects of mangrove oiling and have included appropriate data.

Pg. 27, DES pg. 284 - As stated earlier, we agree that NPDES permits apply to discharges into the Gulf from OCS areas, but the Department should be given an opportunity to participate in the establish-

ment of effluent limitations for discharges. Also see our response to Florida Audubon Society's review comments (page 13 of their letter) in Section IX. b. 4. of this volume concerning effluent limitation of produced waste water.

Pg. 27, DES pg. 290 - Appropriate changes have been made.

Pg. 28, DES pp. 294-298 - We requested that the DOD provide this probability analysis by September 24, 1973. They have replied that they will not be able to fulfill our request prior to November 1, 1973. (See DOD letters immediately following EPA's attached review comments). Also see Vol. 2, Sec. II. F. and K. which pertain to this matter.

Pg. 28, DES pg. 303 - The corridor pipeline studies mentioned in Vol. 2, Sec. IV. C. and Vol. 1, Sec. I. H. 5. will determine in cooperation with appropriate state authorities where these pipelines will go. The Department of the Interior has no authority to stipulate where onshore facilities can be located. We do have the authority through normal administrative procedures to deny construction of onshore facilities in Federally owned and operated conservation areas. Should a situation arise involving a request for permission to construct an onshore facility in such an area then this Department would very carefully examine the matter before denying or approving any request. If necessary an environmental assessment or an environmental statement would be prepared.

Pg. 28, DES pg. 306 - This entire section has been rewritten. See Vol. 2, Sec. III. H.

Pg. 29, DES pg. 318 - Intentional discharges from offshore platforms require both field and laboratory studies as EPA has noted previously. Until the results of these studies (Vol. 1, Sec. I. H. 5.) are known, it is our judgment that these matters receive more adequate treatment through descriptive analysis than they would in a matrix context.

Pg. 29, DES pg. 346 - Automatic remote alarm systems are required on unmanned facilities. There are basically three types of systems: a) temperature sensing systems; b) velocity alarm system; and c) pressure sensing systems.

Pg. 29, DES pg. 348 - See Vol. 1, Sec. I. F. 3. b. No barium is intentionally discharged. We are unaware that barium sulfate, an extremely insoluble compound could be "neutralized" or rendered more inert than it is already. (Its solubility is equal to 0.000222 grams per 100 ml of cold water.)

Pg. 29, DES pg. 350 - We agree with EPA that more inspections are desirable. More inspections are being conducted now than ever before, but there are still resource and personnel constraints. The Geological Survey is taking steps to improve and expand its inspection force and procedures. See Vol. 1, Sec. I. H. 5. and Attachment D in Vol. 5.

Pg. 29, DES pg. 351 - Inspections are undertaken for all workover operations. When workovers are scheduled, inspections are conducted. The information in the DES assumes that all is going well, but if workovers are needed then they will be inspected.

Pg. 30, DES pg. 354 - No public notice of infractions is issued by the Department although the information in Geological Survey's files and records concerning infractions is available to the public.

Pg. 30, DES pg. 355 - The information requested has been incorporated in the FES. It should be pointed out that if a down hole safety device fails then the well blows out. Therefore, testing involves physical removal of the device from the well and the data relating to this testing during an average reporting period are included in the FES. (Vol. 2, Sec. IV. A. 3.)

Pg. 30, DES pg. 359 - These records are available and can be obtained by EPA and the Coast Guard if they so request.

Pg. 30, DES pg. 370 - The Federal Government has no regulatory authority for installation or maintenance of bulkheads in marshland areas. Inspection and maintenance has been a problem in the past and private landowners, and state and local authorities may wish to give this matter some attention if these problems are to be avoided in the future.

Pg. 30, DES pp. 377 and 394 - Revision of appropriate operating Orders acknowledging EPA's permitting authority will be made.

Pg. 31, DES pg. 386 - Appropriate changes have been made in the FES.

Pg. 31, DES pg. 340 - Subsea completions are no longer required to develop the tracts in the Pensacola South No. 1 area. This is the result of deletion of 12 tracts and the completion of negotiations with DOD.

Pg. 31, last para. and pg. 32 - We agree that water-oriented bird life, and threatened and endangered birds are of special value and are deserving of a high priority level of protection. The distance our proposed tracts are from Saint Marks National Wildlife Refuge leads us to believe that an oil spill reaching this area is extremely remote. The closest tract to Saint Marks is over 90 miles away. We do admit, however, that we are unable at this time to evaluate the effect of an oil spill in this area on the ivory-billed woodpecker.

We have included, as part of this sale proposal, a study that will enable us to correctly evaluate the scope and intensity of OCS operations on shoreline flora and fauna. See Vol. 1, Sec. I. H. 5.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 26 1973

OFFICE OF THE
ADMINISTRATOR

Mr. Curtis J. Berklund
Director
Bureau of Land Management
Department of the Interior
Washington, D.C. 20240

Dear Mr. Berklund:

The Environmental Protection Agency has reviewed the draft environmental impact statement for the proposed 1973 Outer Continental Shelf Oil and Gas Lease Sale, Offshore Mississippi, Alabama and Florida, and our detailed comments are enclosed. The action described in the statement is enormously significant from several viewpoints. It is the first opening of virgin Outer Continental Shelf (OCS) to oil and gas development since the passage of the National Environmental Policy Act, and it is the forerunner of a plan to open up for leasing other large areas along the coastline of the United States. Because of the significance of this proposed action, we have directed a considerable effort to the review of this draft statement.

As the statement clearly recognizes, the Eastern Gulf is a biologically rich and ecologically significant area. Our review indicated insufficient baseline ecological data are available to assess potential interim and irreversible damage to the aquatic and shoreline environment. We believe the missing ecological data as discussed in the attached detailed comments must be obtained before the impacts of the proposed action can be fully analyzed.

In view of the potential significant environmental effects of the proposed action, we suggest that the final environmental impact statement be expanded to include consideration of additional alternatives. Specifically, we believe that consideration should be given in the final

statement to the alternative of altering the lease sale to offer for sale at this time only those areas in the Mobile lease sector, and withhold lease offerings in the Pensacola, Appalachicola and Tampa-Tarpon Springs areas pending completion of appropriate baseline data collection and analysis. Such an alternative would involve earlier development of areas which are adjacent to already developed and affected areas of the Gulf. The Department might also include in this consideration an evaluation of altering their lease timetable to offer additional tracts in areas of the Gulf which are already under development. This action could be in lieu of offering virgin areas prior to completion of a program to collect and evaluate baseline environmental data. Accelerated development in the Mobile area would, however, necessitate caution to avoid damage to unique resources such as the Gulf Islands National Seashore and environmentally susceptible marine and terrestrial life forms.

If, in the interest of national needs, it is necessary to proceed with this lease sale as proposed, another alternative that could be assessed in the final statement is implementation of a definitive plan for acquiring the needed baseline data, especially for the three easternmost areas in the Gulf, concurrently with the initial pre-production activity. Along with the sampling and analytical procedures for the data acquisition program, evaluation of such an alternative should include a schedule for accomplishing the objective, including a time phased plan which describes the coordination of the oil exploration and development operations with the data gathering activities. To be effective, the studies should be completed and the environmental impacts fully analyzed before emplacement of permanent structures and production operations are permitted.

Regardless of the alternative chosen, we believe that an intensive program to collect and analyze baseline biological, chemical, hydrological and other data in the Eastern Gulf area should be commenced immediately. For the longer term, we strongly recommend that the Department consider establishing a systematic program: (1) to collect and analyze baseline environmental data in those areas of

the Gulf which are most promising for mineral development within the next few years; (2) to conduct an environmental study of the entire Gulf marine ecosystem as a basis for broadly analyzing oil and gas development strategies and for understanding the cumulative effects of alternatives. If possible, the timing and substance of such a program should be outlined in the final statement. This would supplement and underlie the effort noted in the environmental impact statement which the Department is initiating to monitor and analyze the effects of OCS oil and gas operations resulting from the proposed five-year lease schedule.

We are aware of the time and resource constraints placed on the Department by present commitments. Implementation of the data acquisition program suggested above will require a substantial resource commitment, and an early effort is needed to explore the availability of the needed funds. In order to expedite accomplishment of a data acquisition program and obtain scientific concurrence on the sampling and analytical protocol, the Department might consider establishing an interagency task force to provide advice and support for an appropriate program. We will be pleased to assist in such an effort.

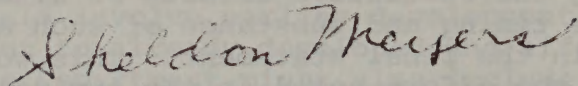
In addition to the above comments, we suggest that the Department consider adopting stipulations, or other equally binding requirements, that leases in new areas utilize the best available technology and sequence operations for exploration, development and transport of oil, to minimize pollution potential. In this connection, the transport of oil by pipeline rather than barges or tankers, should be encouraged and utilized to the maximum extent. The attached detailed comments discuss this matter in more detail.

In light of our review of this draft statement and in accordance with EPA procedures for implementing our review responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act, we have designated this project and the draft environmental impact statement as Category ER-2. Under our rating system, this means that EPA has reservations concerning the environmental effects of the proposed action and believes that further study of suggested alternatives or modifications should

Page Four

be included in the final environmental statement. We would be pleased to discuss our classification or comments with you or members of your staff.

Sincerely yours,



Sheldon Meyers
Director
Office of Federal Activities

Enclosure

EPA Comments on Environmental Impact Statement on
Proposed 1973 Outer Continental Shelf Oil and Gas General Lease Sale,
Offshore Mississippi, Alabama, and Florida - August 1973

INTRODUCTION

The proposed action by the Department of the Interior calls for the leasing, for oil and gas development, of 159 tracts covering nearly 900,000 acres of offshore Alabama, Mississippi and Florida. The total ocean and bay area encompassed and likely to be affected by the lease sale is approximately 1500 square miles. The maximum development plan estimates call for 1,300 wells located on 300 platforms connected to 800 miles of pipeline and 15 shore support and supply facilities.

The proposed action is a highly significant one since it is the beginning of the continental expansion on all coasts of offshore oil and gas development. Further, it is the first proposed opening of a virgin outer continental shelf area since the passage of the National Environmental Policy Act. In addition, the eastern Gulf has some of the richest biotic communities, is a critical source of nutrients to the entire Gulf body, possesses a highly valuable fishery resource, and has the potential of developing substantial aquacultural production. EPA has therefore devoted considerable effort by a multi-disciplinary group in the review of this statement and development of recommendations. The consensus of EPA's review is that the Department

has utilized the available impact data for the area and extrapolated applicable data and knowledge from studies of other areas.

The first part of our review is general in nature and addresses the two major issues of baseline data and monitoring and the technological issues related to exploration, development and transportation. The second part of our review is an iteration of our specific reactions to individual issues raised in the statement.

MEASUREMENT OF IMPACTS AND LACK OF INFORMATION

The present status of knowledge concerning the biota of the Eastern Gulf of Mexico with regard to both chronic and acute effects of oil exploration and production is inadequate to answer several critical environmental questions concerning this proposed activity. Although the effect of high level spillage is more readily understood, the environmental statement addresses the issue of low level spills as follows:

"The problem of determining potential impact from chronic, low-level spillage is difficult. Virtually none of the reports of scientific investigations of oil spillage, which we were able to obtain, addresses the effects of low-level, continuous spillage in offshore waters."

The question of the long-term effects of chronic oil spillage may be the ultimate question in the future environmental impact of offshore oil and gas leasing. Adequate baseline data are not available. It is almost impossible to analyze what the environmental impact of a lease sale would be without knowing what will be sacrificed in order to undertake mineral development.

Many of these inadequacies are described in a study entitled "A Summary of Knowledge of the Eastern Gulf of Mexico, 1973", which was funded by the American Petroleum Institute, and by the National Science Foundation. This recent document is one of the major sources of information cited in the Environmental Impact Statement. It is essential that sufficient biological baseline data be acquired prior

to the commencement of production activities which may alter the existing conditions. It is essential also that biological information be collected concurrently with other data such as chemical and hydrological data which influence and control the biota and their behavior.

Specific studies that are needed to remedy the present gaps in the understanding of the Gulf as an ecosystem are described in general terms below:

(1) Studies are needed to provide a benchmark for characterization and comparison of possible effects. Detailed, seasonal studies of the more important species or trophic levels within the lease area and areas likely to be affected would be indicated. The contribution of these areas to Gulf biotic production and functioning must be understood prior to potential alteration.

Specific studies should include:

- o Seasonality and distribution of zooplankton and ichthyoplankton in the lease area;
- o Seasonality and distribution of phytoplankton within the lease area;
- o Seasonality and distribution of nektonic organisms within the lease area;
- o Seasonality and distribution of benthic organisms within the lease area;

- ° Key non-biological parameters such as meteorology, current directions and velocities and their interactions with biological parameters;
- ° The determination of chemicals and nutrients in the water column and sediments.

It is our judgement that the studies should be performed over sufficiently long ecological time periods to be environmentally meaningful. Since most natural systems are subject to large normal variations, studies should usually be performed over a minimum two-year observation period. A suggested phased leasing program as recommended below would provide for this observation period.

(2) The basic question of the role and importance of the proposed lease area to the Gulf Ecosystem must be addressed. Because of its unique characteristics, such as short estuarine salinity gradients and extreme shallowness, the Eastern Gulf has been considered by many marine scientists as an extended estuary. For instance many species such as the peneid shrimp and groupers exhibit an onshore-offshore migration pattern during their life cycles. Thus, the shelf area under consideration makes many known and possibly as yet unknown, contributions to inshore productivity and is an interrelated part of habitat areas. These contributions

and effects should be quantitatively known and understood before massive perturbations are permitted.

A corollary and highly significant area of focus is the biological and chemical relationship of the Eastern Gulf to the rest of the gulf marine system. Therefore, we recommend that the Department of the Interior consider the development of an appropriate environmental impact analysis of this and other potential development areas on the overall Gulf system so that in the future alternative and cumulative development strategies and associated impacts can be adequately evaluated and compared.

(3) Studies will be required on the supportable estimates of probable effects from seepage, spills, cuttings, drilling muds, oily brine discharges and possible micro-nutrients, on the major trophic components. These estimates require field and laboratory studies to assess the ecological consequences of chronic or acute exposure to these factors. Several examples of needed studies, but by no means a complete list of needs, are cited below:

- o The effects of hypersalinity caused by brine discharges on the eggs and larvae of key or dominant nekton (Field and Laboratory Studies).
- o The ecological effects of the discharge and resuspension of cutting and drilling muds on benthos with particular emphasis on the process of recolonization and dispersal.

- o The synergistic or cumulative effects of chronic and acute discharges on red tide organisms, particularly *Gymnodinium* spp.
- o The toxicity of various process additives and wastes on key trophic components.

We recommend that the final impact statement for oil and gas leasing provide a schedule of needed studies for each sale area including where appropriate the types of studies outlined above.

(4) Studies to ascertain the ability of key gulf ecosystems (mangroves, oyster reefs, patch reefs, etc.) to withstand, and recover from (a) chronic additions, (b) massive spills and (c) periodic minor spills of petroleum are needed. These studies will provide estimates of the ability of these major ecosystems to recover from, or purge themselves of the effects of these spills. Successional and transitional change during and following spills is currently conjectural. However, a high degree of recuperative ability is assumed for most of the affected biota. These assumptions must be validated by reliable data before an optimistic or unrealistic buffering capacity is asserted. Since both chronic and acute releases are predicted with some certainty in the impact statement, it is crucial that these effects be known.

We recommend that the Department of the Interior consider alternative strategies for phased lease sale offerings to assure that adequate biological studies are made in order to estimate impacts

before possible significant irreversible damage is done to the environment. We suggest as one alternative that the Department of the Interior select for lease offering some of the South Mobile tracts which are either adjacent to producing Louisiana OCS areas or where drainage is necessary to maximize production and serve the public interest. This area could be offered separately as Sale 32 and maintain the present schedule or in conjunction with Sale 33 for Louisiana OCS areas. Further, DOI may consider withholding for sale at this time the remaining acreage (Pensacola, Apalachicola, and Tampa-Tarpon Springs) until adequate biological baseline data ~~are~~ collected and an adequate environmental analysis of potential impacts from the oil development is made. The Department could also consider the alteration of their lease schedule to offer additional tracts in areas of the Gulf that are already under development. In support of this action we propose the immediate initiation of a program for data acquisition and analysis for the Eastern Gulf area. Those tracts already proposed for sale should be studied and analyzed to determine impacts and establish data necessary to initiate monitoring activities before any drilling begins and preferably before lease agreements are finalized. Other areas in the Eastern Gulf likely to be opened for leasing within the next few years

should also be studied to establish a baseline and enable DOI to anticipate environmental impacts with some degree of confidence.

If, however in the interest of national needs, it is necessary to proceed with this lease sale as proposed, another alternative that could be assessed in the final statement is implementation of a definitive plan for acquiring the needed baseline data, especially for the three easternmost areas in the Gulf, concurrently with the initial pre-production activity. Along with the sampling and analytical procedures for the data acquisition program, evaluation of such an alternative should include a schedule for accomplishing the objective, including a time phased plan which describes the coordination of the oil exploration and development operations with the data gathering activities. To be effective, the studies should be completed and the environmental impacts fully analyzed before emplacement of permanent structures and production operations are permitted.

MONITORING STRATEGIES

The statement does not adequately discuss the critical monitoring requirements for such significant development activity. Quantities of baseline data must be made available on the biota of the Eastern Gulf of Mexico in order to base a realistic monitoring program. Monitoring should include biological and ancillary physical and chemical data of the pelagic and benthic zones.

A minimum monitoring program for the offshore areas which would correspond to that presently contemplated for EPA's ocean dumping program would be a sampling station in the center and four corners of each lease tract.

It is our judgement at this time that the frequency of monitoring should be no less than four times annually to assure reasonable coverage of the life and climatic cycles of this area.

Because of the lack of biological knowledge and data on the interrelationships of the species, it is imperative that the monitoring program be broad in its scope until some indicator species or populations are discovered. Examples of ecosystem components that should be sampled are the phytoplankton, zooplankton, fish eggs and larvae, fish populations, and the benthic communities. Such broadbased monitoring should be performed until it is demonstrated that offshore oil development does not affect the Eastern Gulf of Mexico flora and fauna or until some indicator communities are discovered.

which reflect and measure the biological effect of oil development and production on the leased sites.

In addition to offshore monitoring, data must be obtained on the shoreline, since it is the shoreline where continuously discharged or spilled petroleum products will do extensive damage. The mangrove swamps and shellfish beds should be periodically examined to ascertain if hydrocarbons are accumulating in adverse quantities in these areas.

We recommend that the Final Impact Statement describe adequate monitoring programs including a designation of responsibilities for the various parts of such a program.

REQUIREMENT FOR THE USE OF KNOWN TECHNOLOGY AND THE SEQUENCING OPERATIONS TO MITIGATE POLLUTION POTENTIAL

The major shortcoming of this Environmental Impact Statement is that it fails to treat the leasing of these new areas offshore Mississippi, Alabama, and Florida as a new start. It does not address itself to the opportunity for correcting serious shortcomings of the past which have been pointed out by EPA in its review of prior impact statements for other sale areas. The Department of the Interior, in moving into this virgin area, should examine its leasing and regulatory procedures and current industry practices with the aim of preventing potential environmental degradation. The environmental impact statement should reflect consideration of these issues.

Under Department of the Interior regulations, the oil industry has been permitted to conduct drilling and production activities from the same platform. At the time of the disastrous Shell platform fire off of Bay Marchand, two wells were being drilled, twenty-odd were in production, and one was undergoing wire line workover on the same platform. The multiplicity of activity in the small work area of a single platform greatly increases the chance of an accident. The Department should reconsider this practice particularly with regard to opening new OCS areas.

Again, in the past, it has been the practice of the operators to begin development work and production before pipelines to shore have been constructed. The initial production was barged ashore. The discharge of an extraordinary quantity of oil into the Gulf has been predicted in this Impact Statement. Since most of this predicted pollution will come from barge and tanker operations, we recommend pipeline construction before production begins. If this recommendation is carried out the quantity of vessel discharges could be drastically reduced. The problem of small fields that would not support a pipeline could be examined on a case by case basis and where necessary, exceptions granted. Ultimate fuel recovery would be the same or greater as gas would not have to be flared and the energy from this source might be utilized rather than wasted.

In the past the location of pipelines serving the OCS has been determined by industry initiative and economic incentive. Previous impact statements have acknowledged the desirability of requiring operators to pool their pipeline requirements and use common corridors to minimize dredging and channeling offshore, onshore and especially in wetland areas. Yet, no mechanism to accomplish this desired goal has been proposed.

Current right-of-way bills before Congress may require the use of such corridors. However, the Department of the Interior should, in the meantime, consider changing their leasing stipulations to require pipeline development minimizing environmental harm.

EPA APPLICATION OF EFFLUENT GUIDELINES AND PERMITS
IN THE TERRITORIAL SEA

The position of the Department of the Interior with regard to permitting discharges into the Gulf of Mexico is unclear, as stated in the EIS. The paragraph on Notice to Lessees and Operators (page 377) gives as an example a Notice issued on December 11, 1972 which would seem to indicate that effluent limitations being developed by EPA would apply to discharges into the Gulf. However, the notice itself reads that it applies to disposal of produced waste water into areas other than the Gulf of Mexico. Thus, by excluding the Gulf from the application of effluent limitations, the DOI discharge limitation of 50 ppm average and 100 ppm maximum of oil would be the only applicable limitation for discharges into the Gulf.

However EPA's position is that the effluent limitations of Public Law 92-500 (Federal Water Pollution Control Act) do apply beyond the territorial sea, and that NPDES permits will be required for these discharges. This is not only true for discharges of produced brines, but also for the discharge of drilling fluids or any other substance.

DATA PRESENTATION

Another problem which surfaced in reviewing the EIS, is the presentation of data. In many cases it is uncoordinated, appearing in widely separated parts of the statement and, in some cases information presented in one part conflicts with that in another. For example, the leasing of the proposed tracts for gas and oil production encompasses a range of activities from initial exploration and drilling, to eventual production, shipment by barge, and transshipment by tanker. Each of these activities engenders pollution in some form. Estimates of pollution from each activity are found throughout the report. However, at no point is a summary table presented showing cumulative yearly pollution from all sources. Such a summation should be presented.

Attached is a table compiled by EPA using data from the impact statement showing predictions of quantities in barrels per year of oil spilled. It shows the possible discharge of a very large amount of oil into the Gulf. It is admittedly an overly black picture, and some of the quantities are probably not additive. Applying operational and accidental rates to both barge and tanker operations is not realistic, since it is very unlikely that the total production would first be shipped by barge and then by tanker. However, the table still has value. It shows the need for presenting the total of predicted

discharges in one place in the EIS. It also shows that about 75 percent of the predicted discharge will come from vessel operations.

This strongly reinforces the recommendation that production should be delayed until pipelines are constructed.

SPECIFIC COMMENTS

Our specific comments concerning issues that require further clarification, substantiation or discrepancy resolution are discussed in the order of their appearance in the statement as follow:

Page 31. "The use of a vibrator system, sparkers, air guns, and gas guns now provide excellent seismic data, with no harmful effects on the marine environment." This statement requires additional substantiation and supporting data.

Page 50. The discussion of blow out preventers and down hole safety devices gives the reader a false impression about the reliability of these items--especially the down hole safety devices. Reliability of velocity actuated subsurface safety devices has been very low in recent disasters (11 out of 22 wells failed in the Bay Marchand fire). The newly required surface controlled down hole safety devices have not been in OCS service long enough to have a proven track record. The reliability of these critical pieces of equipment should be discussed.

Page 55. The interaction between workover operations during drilling and workover operations during production are mentioned on this page. The interaction between drilling and operation should also be mentioned. We feel that the impact statement should more adequately explore the consequences of mishaps occurring during these concurrent operations, and that rules prohibiting the multiple

operations which tend to increase the probability of spills or releases of toxic materials be developed.

Page 55. The discussion of pipeline leak detection systems gives no indication of how large a leak might go undetected because of the inaccuracy of measuring devices. Data presented for the proposed trans-Alaska pipeline give the accuracy of normal flow metering at about one percent. Sophisticated line volume balancing is necessary to achieve a greater accuracy than this, and may not be possible with several platforms producing into one pipeline. The impact statement should examine in more detail the problem of pipeline leaks, their detection, and the environmental impact of chronic leakage on the marine biota.

Page 57. "In much of the Continental Shelf in the Gulf, even unburied pipelines eventually sink into the soft underlying sediment and are thus buried, but this phenomenon may require months or years to take place." The statement should identify the source of this information and include supporting data.

Page 63. The discussion of tanker operations should mention the desirability of replacing hoses with loading arms as used on marine terminals. They present a much safer operation than hoses and are easily fitted on new facilities.

Page 70 "There will be a cumulative effect resulting from solid and liquid waste disposal associated with OCS development and any oil polluting events should they occur. The effect will be a physiological stress and death for oiled plants and

animals and possible contamination of marine food sources for man. The scope, duration, location, and overall significant effects of an oil spill on a cumulative basis are unknown. However, the area of greatest potential for receiving lethal and sublethal adverse effects on a cumulative basis are embayments and semi-enclosed waters where many species undergo early development and are more vulnerable to toxic compounds. The chance of a massive oil spill resulting from OCS operations impacting upon areas such as these is considered low because of the distances involved (never closer than three miles from such areas) and the fact that, in the history of OCS leasing, no oil spill has ever penetrated semi-enclosed embayments, estuaries, or wetlands."

In an area which frequently experiences thunderstorms, tropical storms, and hurricanes, a three-mile buffer zone between a major oil spill and an estuary, wetland, or embayment provides very little protection. The conclusion that an oil spill would likely not reach such areas should be supported with data.

Page 88, figure 14. The statement depicts wind roses for New Orleans, Pensacola, Apalachicola, and Ft. Myers. Although accurately representing data collected by the U.S. Naval Weather Command, this presentation of wind data can be misleading. Looking at historical wind data for three areas, it becomes apparent that there are certain problems. In the Apalachicola area, wind blows toward the adjacent shoreline almost 49 percent of the time and in the Pensacola area, over 40 percent of the time. It is obvious that during times that these winds are blowing towards the shore, there is a greater chance of oil reaching shoreline areas. This is true whether the oil be spilled from a producing platform or from a tanker, barge, or

pipeline. The data for the Ft. Myers, Apalachicola, and Pensacola areas are as follow:

<u>Area</u>	<u>Direction of Wind</u>	<u>% of Observations</u>	<u>Mean Speed (Knots)</u>
Fort Myers	To N	7.1%	9.7
	To NE	4.0%	10.0
	To E	4.4%	11.4
	To SE	6.8%	12.4
Apalachicola	To SE	9.7%	13.3
	To E	8.5%	11.5
	To NE	6.4%	10.0
	To N	9.0%	10.2
	To NW	14.9%	11.0
Pensacola	To NW	17.0%	11.6
	To N	10.3%	10.9
	To NE	6.1%	10.7
	To E	7.0%	12.0

Page 130. A statement is made, "Red tides appear to be triggered by increased iron with other trace elements or chelators discharged via land runoff after heavy rains." This is not totally accurate, in view of the conclusions drawn later in the statement about the possibility of red tides. The Environmental Impact Statement alludes to the following quote from Steidinger (1973):

"At one time it was thought that phosphorus or vitamins were the triggering factors or at least "limiting" factors; however research showed these factors to be at non-limiting levels (Steidinger and Ingle, 1972). Further, laboratory data (Wilson, 1966) indicated that chelated iron greatly enhanced *G. breve* growth. Subsequently, statistical analyses of 25 years of data revealed that if and when the iron concentration in the Peace

River reached 235,000 pounds over a three month period, a major red tide occurred in the coastal waters off Charlotte Harbor (Ingle and Martin, 1971). Therefore, this has provided a method of predicting Florida's red tides in that particular area. Iron, per se, has not been pinpointed as 'the' triggering factor, yet it appears to be a suitable index and possibly coincides with other trace elements or chelators discharged via land runoff after heavy rains (Martin, Doig, and Pierce, 1971)."

These quotations are contradictory and should be clarified.

Page 209-219. "The effects of dredging on aquatic animals in the Mobile Bay system have been investigated on at least two occasions; the investigators observed no adverse effects in either case." The source of this information and supporting data should be included in the statement.

Page 228. EPA estimates of oil spilled from the Bay Marchand (Shell) fire, based on remote sensing surveys, are about double the quantity estimated by DOI.

Pages 245, 247, 267 and 360. Data presented on these pages and elsewhere in the EIS give the impression that the use of dispersants is a common and accepted practice in cleaning up oil spills. Annex X of the National Oil and Hazardous Substances Pollution Contingency Plan basically sets forth a no dispersant policy. Exceptions can be made for safety reasons (to prevent fire or explosions) or for certain other circumstances such as the protection of endangered waterfowl. However, the approval of EPA is required, except in case of safety when the approval of the On-Scene Coordinator is required. The basic

thrust of Federal policy in spill cleanup is physical removal of the oil. The EIS should reflect this policy.

Page 252 . . . "We believe that the plankton and other populations of the Mississippi-Alabama-Florida Outer Continental Shelf ecosystems will be able to absorb the impact of a major oil spill and recover rapidly. Our greatest concern is for coastal areas and estuaries. It is not likely that significant amounts of oil spilled from platforms would reach most coastal areas because of the distance from shore, prevailing winds and currents, and cleanup operations."

We have seen no factual data in this Environmental Impact Statement to support the conclusion that the ecosystems of the Mississippi-Alabama-Florida Outer Continental Shelf will be able to absorb the impact of a major oil spill and recover rapidly. If such a conclusion is to be made, data should be presented in the statement. We do not believe the impact statement presents adequate analyses for predicting that the oil spilled from platforms would not reach coastal and estuarine areas. The definition of coastal and estuarine areas is of critical importance; due to the physical characteristics of the area under consideration. It is a very difficult determination to make.

Page 253 . . . "In addition, it is predicted oil will be shipped by tanker from Tampa Bay and St. Joseph Bay within two to five years of leasing. This means that there will undoubtedly be frequent minor spills from bunkering operations in these areas; there is also the more remote possibility of major tanker accident. It is known that the ecosystems in these estuaries are already stressed (Section II, G) from sewage and industrial pollution. . . . If, as a result of this proposed sale, tankering of oil is used, we predict an incremental increase in the degradation of these estuaries."

There is no evaluation as to whether the ecosystems of these estuaries could recover from either a major spill or a series of minor spills. This is a critical issue which should be addressed in the final Environmental Impact Statement.

Page 255. In discussing the probability of an occurrence of red tide the statement reads: "Therefore, on the basis of iron content, we predict that the discharge of formation waters will not trigger a red tide. Further, we do not believe that other constituents of the brine could be responsible, because they are not known to be limiting factors in red tide blooms." In the first paragraph, it is stated that neither the quantity of brines nor the iron content can be predicted. Inference is then used to estimate iron content. In prior analyses, the fact that the scientific community does not know specifically what causes a red tide has been acknowledged (see comments for page 130). Hence, without knowing exactly what will be produced and discharged into the water, and without knowing exactly what causes a red tide, the prediction that the discharges will not cause a red tide is unsubstantiated.

Page 256. The statement is made, "It is our conclusion that the effect of increased turbidity would be immeasurably small at more than a few feet from the point of discharge." This conclusion assumes no residual effects or resuspension of pollutants which may be in bottom sediments especially close to land areas and population centers.

Page 256. In discussing impact on nekton, the statement reads:

"Nekton, by definition, include all marine animals which are active swimmers and are able to migrate freely over considerable distances. This mobility, combined with their ability to sense irritation and the natural escape and avoidance behavior, enables them to flee localized adverse conditions."

This line of reasoning ignores the fact that all fish larvae are both nekton and poor swimmers.

Page 257. In discussing the Florida manatee, it is stated,

"Fortunately, the possibility of spilled oil reaching the coastline, except for the Tampa Bay area, is considered to be extremely low because of distance, and the current and wind patterns." However, the current and wind data presented in this statement do not lead to the positive conclusion that oil would not reach coastal or estuarine areas if spilled from a platform. In addition, the possibility of spills from tankers and especially from barges appears to be significant.

Subsequently, it is stated, "At this time we are unable to predict the scope of the impact on nekton, should the proposed sale be held. Based on past observations, we estimate that it would be low." This quotation is ambiguous and unsubstantiated. Given the estimated large amounts of oil which could potentially enter the biosphere from the sale, we consider it important for the impact statement to present estimates of the impact on the nekton.

Page 206. It is felt that discussions of waste sources in the estuaries of Alabama and Mississippi are incomplete and misleading. Water quality in the estuaries and bays of Mississippi, as discussed on page 206 is degraded primarily by the discharge of inadequately treated industrial waste, not by sewage discharges. The pollution contribution from municipal sources is rather minor. It is not only sewage pollution that has forced closure of oyster beds off the coast of Mississippi as indicated in the statement; industries are also major contributors of coliform bacteria to these waters. It is doubtful that industrial and municipal discharges from Bogalusa, Louisiana and Picayune, Mississippi are significant contributors to water quality deterioration off the Gulf Coast. Other significant waste sources along the Mississippi Gulf Coast are Long Beach-Bay St. Louis area, Biloxi-Gulfport area, and Pascagoula-Moss Point area. Water quality degradation in the Mobile Bay area is primarily the result of municipal and industrial discharges from sources in Mobile. Sewage outfalls from commercial development along the Alabama Gulf Coast are minor and result in only localized water quality degradation. The major cause of water quality degradation in Perdido Bay is the discharge from a paper mill in Florida and inadequately treated waste discharged into Bayou Marcus. There are no significant discharges, industrial or municipal, into Perdido Bay from Alabama sources.

Page 264. The lower reach of the Pearl River is not as polluted as are other streams discharging directly into estuarine waters and should be omitted from the discussion of resuspension of toxic materials due to industrial pollution. The Escatawpa and Pascagoula probably receive many more toxic substances than the Pearl River.

Page 269 and 386. Conclusions in the impact statement that the effects of minor spills must be low, since evidence to the contrary is lacking, are unwarranted. Background studies were not performed prior to previous OCS development and very little field work has been done to evaluate these effects. There are conflicting opinions among scientists about the effects of chronic low level pollution, but the authorities quoted in the EIS have expressed concern for those effects and indicated the lack of knowledge in this area.

Pages 271 and 283. The EIS presents conflicting statements concerning the potential harm of discharges of drilling muds. The EPA view is that they must be considered harmful and are subject to EPA permitting procedures and effluent limitations.

Page 277 . . . "Only one record of effects of mangrove oiling was in the literature. Spooner (1970) investigated an oil spill in Tarut Bay, Saudi Arabia, in which an extensive zone of marsh with dwarf mangrove (Avicennia) had received an oiling. She noted that these had served to mop up considerable amounts of oil at the upper part of the tidal range. Mangrove leaves were oiled on the lower half of the shrub, but, the soil level was usually free from oil. Observations three months later showed that some mangroves were losing all of their leaves, but many survived, some bearing flowers and fruits, showing that these open mangrove areas were not affected

seriously. . . . We expect the same results if Tampa Bay mangroves received an oiling."

In the absence of data giving numbers or percentage of mortalities of the mangroves in the Tarut Bay example, it could also be assumed that many mangrove trees died. If Dr. Spooner's investigation showed that open mangrove areas were not seriously affected, the data supporting that conclusion should be presented at this point in the Environmental Impact Statement.

Page 284. Brine Water Discharge. A letter from the late Dr. Pecora, while Under Secretary of Interior, to Mr. Donald M. Mosiman of EPA, dated April 21, 1972 advocated lower limits of oil in brine discharges by indicating that the oil content of produced water from platforms in the Santa Barbara Channel was approaching 10 ppm after treatment, which is considerably lower than the 50 ppm permitted by OCS Order No. 8. EPA is presently developing effluent limitations for discharges from production platforms which will be based on technological feasibility and OCS operations will be subject to these limitations.

The impact statement reads, "Based on past OCS experience, we anticipate no impact to result from contamination of catches." Earlier in the same section it is admitted, "It has been shown that fish that live in the vicinity of chronic spillage are likely to be internally contaminated." These two statements are contradictory and should be resolved in the final statement.

Pages 294 through 298. The proximity of the proposed leases to Air Force salvo areas and missile or other ordnance testing grounds is of serious concern. We have no basis for evaluating the probability of a major accident. However, at an absolute minimum, EPA requests inclusion of such probability analysis in the final Environmental Impact Statement. Furthermore, that probability analysis should be concurred in by the Department of Defense.

Page 303 . . . "The impacts of oil spills and pipeline and onshore facility construction on biota, air and water quality, beaches, etc., have been discussed previously. It is not known at this time whether a pipeline or onshore facility will be constructed in any conservation area. However, if this should happen, impacts as discussed previously will occur. Similarly, if an oil spill were to reach one of these conservation areas, impact on beaches, biota, etc., would be similar to those discussed in previous sections."

We recommend that, the Department of the Interior stipulate that no pipelines or other facilities will be allowed in conservation areas without concurrence by the State and after public hearings.

Page 306. The discussion of induced industrialization in the coastal zone should take cognizance of applicable State and Federal law and regulations. For example, the complex source regulations might apply to any new industrial center to be constructed.

On page 309, it is stated, "If produced waste water is disposed of onshore then this would be expected to result in the single most adverse environmental effect associated with onshore terminals." Given the fact that any treatment and discharge of waste water onshore would

be subject to the 1972 Amendments to the Federal Water Quality Act, we would disagree with this statement.

Page 318. Intentional discharges (produced brines, drilling muds, ect.) should be included in the list of impact producing factors.

Page 346. Are automatic remote alarm systems required on unmanned facilities to detect an unsafe or potential pollution incident?

Apparently the discovery of the Chevron fire was by casual observation from another platform. Alarm systems for unmanned facilities should be discussed.

Page 348. Waste disposal practices require the neutralization of toxic substances before the disposal of drilling muds. How is the barium contained in these muds neutralized?

Page 350. On the subject of on site inspections, we feel that more than one inspection per unit during the course of drilling would be highly desirable, since drilling normally takes two to three weeks. We suggest that two visits per month would afford better control and prevention incentive.

Page 351. The inspection schedule indicates that drilling operations are inspected more frequently than production. However, no schedule is given for workover operations. These are probably more hazardous than drilling and should be given special attention in the inspection schedule.

Page 354. The public disclosure of penalties, shutins and lease cancellations has a beneficial effect on enforcement of orders or regulations since the oil companies are sensitive to the image that they present to the public. The statement should discuss the procedures for making public notices of infractions and penalties assessed against operators.

Page 355. The list of equipment malfunctions should include downhole safety devices.

Page 359. (Notification Requirement of OCS Order No. 71). Reporting under the OCS order tends to be in a gray area. Although immediate notification to EPA or the Coast Guard in cases of small spills may not be necessary, these agencies should be advised of all spills as soon as possible.

Page 370. The use of bulkheads to prevent salt water intrusion into marshlands requires periodic inspection and maintenance of these bulkheads to be effective. An EPA survey of offshore production facilities in April of 1972 noted that many bulkheads that were flown over were deteriorated and were allowing water to pass. Apparently no effective regulation exists requiring their maintenance.

Page 377 and 384. The section on Other Requirements acknowledges the jurisdiction of EPA's permitting authority on the OCS. However no mention is made of the fact that effluent limitations now being developed by EPA will apply to those discharges as well.

Neither OCS Operating Order No. 8 nor the Notice to Lessees of Dec. 11, 1972, acknowledges the jurisdiction of EPA in permitting and limiting effluents on the OCS. Appropriate changes should be made in the Operating Order and reflected in the EIS.

Page 386. Statements on the effect of light contamination of biota by crude oil and petroleum derivatives conflict with those presented on page 269.

Page 410. On the subject of subsea completions, it is not clear how it will be possible or if it will be possible to re-enter a well should it be necessary in the case of an uncontrolled flow. If a relief well is the only method of reestablishing control, then the pollution potential from these completions will be far greater than from conventional platform operations since it will not be possible to burn the escaping oil while the relief well is being drilled.

It is also noted that subsea completions would pose a hazard to trawling operations. Is the reverse not also true? Could a trawl not damage a well head or flow line causing a spill? The EIS should discuss the additional hazards peculiar to subsea completions in light of their potential for pollution.

Finally, the adverse effects of oil spills on water-oriented bird life is of great concern. Located in the coastal areas near the proposed lease sites are several wildlife refuges that are of vital importance to thousands of migratory ducks and other birds. For

example, the Saint Marks Refuge (currently being considered for inclusion in the inventory of "Wild" or "Wilderness" lands) in Florida is a protected area frequented by our endangered national bird, the bald eagle, as well as many thousands of other fish eating birds.

The draft statement shows an area off the coast below Tallahassee, Florida as being within the range of habitat of the ivory-billed woodpecker. This bird is thought to be almost extinct and therefore should be given an even higher priority of protection than an ordinary "endangered" species. A significant oil spill in this area would have unknown, but probably far-reaching environmental consequences, possibly even affecting non water-oriented birds such as the ivory-bill.

A survey should be made of the wildlife refuges in the potentially affected areas to see what effect the water quality degrading factors of oil spills will have on their natural resources, and whether additional precautions are required.

Estimated Aggregation of Oil Pollution from Development and Operation
of Oil and Gas Leases as Stated by U. S. Department of Interior in
"Proposed 1973 Outer Continental Shelf Oil and Gas General
Lease Sale - Offshore Mississippi, Alabama and Florida"^{1/}

(Compiled by EPA - September 1973)

<u>Interior Commentary</u>	<u>Pollution Source</u>	<u>Pollutant</u>	<u>Est. Amount per Unit</u>	<u>Expected Pollution</u>	
				<u>Low Est.</u>	<u>High Est.</u>
E.I.S. p. 233 360,000 - 590,000 bbl/day (production) = (131.4 million bbl/yr. - 215.4 million bbl/yr.)	Oil production and Transportation			<u>Per Year</u>	
E.I.S. p. 230 "...we find that only .001% of all petroleum carried by U. S. tankers reaches the oceans as a result of accidents."	U. S. tankers (accidents)	oil	.002% ^{2/}	2,628 bbls.	4,308 bbl
E.I.S. p. 243 "If 6.50% (66,753 bbls.) of all the pollution from handling and ballasting, etc. is from U. S. flag tankers then this represents .006% of total annual throughout." ^{3/}	U. S. tankers (operations)	oil	.006% ^{3/}	7,884 bbls.	12,924 bb
E.I.S. p. 230 "Using the range of production figures 360,000 - 590,000 bbls. daily it is calculated that between 54 bbl. and 88.5 bbl. may be spilled daily (19,700 - 32,300 yearly) as a result of barge traffic accidents."	Barge accidents	oil	.015%	19,700 bbls.	32,300 bb
E.I.S. p. 243 "For tank barges, .018% of all petroleum carried is lost to the environment as a result of leaks or cargo handling."	Barge operations	oil	.018%	23,652 bbls.	38,763 bb

<u>Interior Commentary</u>	<u>Pollution Source</u>	<u>Pollutant</u>	<u>Est. Amount per Unit</u>	<u>Expected Pollution</u> <u>Low Est./High Est.</u>	
E.I.S. p. 233 "If 0.011% of past production is taken as the true spillage rate, then this would mean 14,500 to 23,500 bbl/year of oil produced from tracts included in the proposed lease sale could be spilled."	Production/drilling major spills	oil	.011%	14,500 bbls.	23,500 bbls
E.I.S. for 1972 OCS Sale, p. 61	Small spills and daily discharge ^{4/}	oil		<u>1,700 bbls.</u>	<u>5,700 bbls</u>
E.I.S. p. 285 "In addition a few hundred bbl, per year will likely be released through minor spillage."	Total direct oil pollution per year			<u>70,064 bbls.</u>	<u>117,495 bbls</u>

^{1/} Estimates in some cases may be duplicative particularly in reference to spills from barges and tankers.

^{2/} See E.I.S. p. 229. Interior's estimate of .001% spilled. The data cited on p. 229 is from a study based on 1969-1970 data which analyzed 203 polluting incidents and outflows (Keith and Porricelli). The statement that U. S. flag tankers accounted for 0.88% was based on a total outflow in that year of approximately 3,016,500 bbls. of oil. Interior used a noncomparable estimate of 1,192,100 bbls. of oil as total outflow. The difference between .001% (DOI est.) and .002% reflects this adjustment.

^{3/} Interior's estimate is probably conservative. Loss of oil from handling and ballasting is more a function of number of tankers (and trips) than tonnage. During 1969 - 1970 (data used by Interior) while U. S. flag tankers accounted for 6.50% tonnage capacity (over 10,000 DWT), it accounted for 10.30% of world tankers (10,000 DWT+).

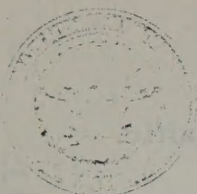
^{4/} DOI has not estimated amounts of oil from small spills and wastewater discharge in MAFLA E.I.S. These figures are a guess estimate derived from experience offshore Louisiana.

1. Department of Defense (DOD)

DOD's review comments are in two parts: (a) A letter dated September 24, 1973 which indicates that potential use conflicts have been resolved; and (b) A letter dated September 17, 1973. Information contained in the enclosure to the September 17 letter was superceded by agreements reached between Secretaries Morton and Clements. See Fact Sheet in Vol. 5, Attachment D. Also included is a letter dated October 11, 1973 which indicates the information concerning hazards analysis which we requested be made available to us by September 24, will not be available prior to November 1, 1973.

Disposition

All of the information, where appropriate, has been incorporated in the FES. See especially Vol. 2, Sec. III.F. for the stipulations agreed upon and issuing from the August 30, 1973 meeting between Secretaries Morton and Clements.



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301

24 SEP 1973

IR

INSTALLATIONS AND LOGISTICS

Mr. Curt Berklund, Director
Bureau of Land Management
U.S. Department of the Interior
Washington, D. C. 20240

Dear Mr. Berklund:

This is in reference to an agreement made at the Department of Interior on August 30, 1973 between Secretaries Morton and Clements concerning oil and gas lease offerings in the outer continental shelf areas of the Gulf of Mexico and the Channel Islands, offshore southern California.

With respect to lease offerings in the eastern Gulf of Mexico, it is our understanding that the Department of Interior would proceed with lease offerings in the areas shown on the enclosed sketch numbered 2 through 12 inclusive, number 14 and that portion of the No. 1 area east of $86^{\circ}20'$ west longitude. This will permit examination and possible exploitation of the oil/gas in a major portion of the area concerned without undue impact on DoD activities. The lease offerings are to provide that low altitude over flight in single and multiple formations of the leased areas will continue at subsonic and supersonic speeds over surface activity and down to an altitude of 500 feet above the highest obstruction. The lease agreements will include the following stipulations:

- a. Hold the Government harmless from any sonic or EM effect caused by the operation of these aircraft and emitters.
- b. Hold the Government harmless from any damage accidentally caused regardless of altitude, by the operation of these aircraft and emitters.
- c. Allow control of their own EM emissions to the degree necessary to prevent damage to, or unacceptable interference with, the DoD flight test activities. Eglin Air Force Base would effect the necessary monitoring, coordination with operators, and control in this regard.
- d. Each company operating boat or aircraft traffic into the Warning area shall enter into an agreement with the Armament Development Test

Center, Eglin Air Force Base, Florida, prior to commencing such traffic. The agreement will provide for positive control of boat and aircraft traffic operating into the Warning area.

It is requested that the foregoing be acknowledged by your department and a statement to that effect furnished this office.

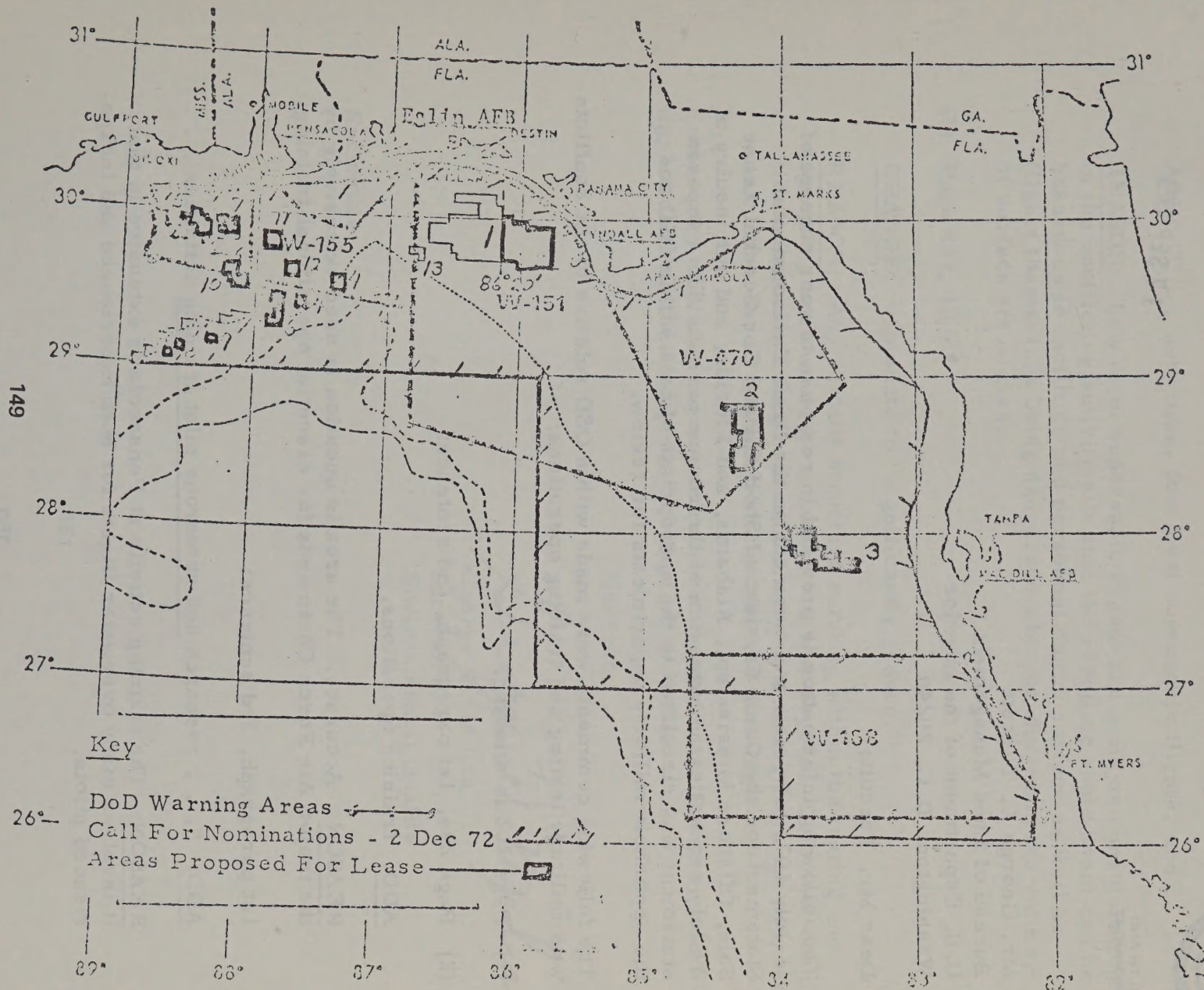
Sincerely yours,

A handwritten signature in dark ink, appearing to read "Edward J. Sheridan", is written over a faint, circular official stamp.

Edward J. Sheridan
Deputy Assistant Secretary of Defense
(Installations and Housing)

Enclosure - 1

DOD WARNING AREAS IN THE OCS OF THE EASTERN GULF COAST





HEALTH AND
ENVIRONMENT

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

17 SEP 1973

Mr. George L. Turcott
Bureau of Land Management
U. S. Department of the Interior
Washington, D. C. 20240

Dear Mr. Turcott:

The following information is provided in response to your request of 18 July 1973 to review and comment on the Draft Environmental Statement for the Outer Continental Shelf Oil and Gas General Lease Sale, Offshore Mississippi, Alabama, and Florida, and our inquiry of 29 July requesting an extension of the review period. The proposed statement was circulated to the appropriate offices within OSD and the applicable military departments for review.

The following comments were made within OSD relative to the conflicts with military testing and training operations:

- (1) Page 202 is missing.
- (2) Page 294, 1st paragraph, 2nd sentence:

ADD: training operations.

REASON: Accuracy. The area in question is used extensively by the major Air Force Commands for essential operational training.

1st paragraph, 3rd sentence:

ADD: ". . . research and numerous pilot training activities . . ."

REASON: The training activity at Pensacola is extensive in that it involves many overwater flights for both experienced and inexperienced pilots.

2nd paragraph, 2nd sentence:

ADD: ". . . activities, low level supersonic flights, and . . ."

REASON: Low level supersonic flights are a major consideration in the conflicting activities in that the resulting sonic boom can be hazardous to facilities and personnel on the surface as well as flights themselves being dangerous when conducted in the vicinity of surface structures.

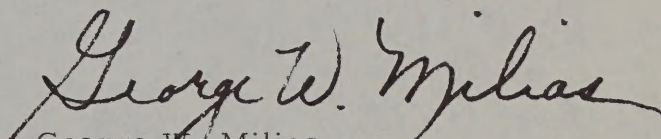
(3) Page 407, line 5:

CHANGE: eliminate to "significantly reduce."

REASON: Any surface structure existing within the testing and operating area would be a hazard to some degree. Complete elimination of hazards would come about only by deleting from the proposed sale all areas in conflict with the test and training range.

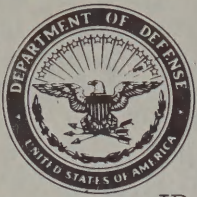
Enclosure 1 contains comments received from the Air Force viewed from impact on their mission prior to 1 September 1973.

Sincerely,



George W. Milias
Director for
Environmental Quality

Enclosure
a/s



OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

IR

INSTALLATIONS AND LOGISTICS

Mr. Curtis J. Berklund
Director, Bureau of Land Management
Department of the Interior
Washington, D. C.

Dear Mr. Berklund:

This will acknowledge your request for an evaluation of the probability of accidents that could occur due to the proximity of the proposed oil and gas lease sale to training and testing areas of the Department of Defense in the Gulf of Mexico. Detailed analyses are being prepared by each of the Services; however, the complexity of the evaluation precludes our forwarding meaningful data at this time. Results will be available by November 1, 1973.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Edward J. Sheridan", is written over a faint, circular official stamp.

Edward J. Sheridan
Deputy Assistant Secretary of Defense
(Installations and Housing)

2. State Agencies

a. Mississippi

The Coordinator of Federal-State Program indicates that the DES was reviewed by the concerned State agencies.

Disposition:

None required.



STATE OF MISSISSIPPI

OFFICE OF THE GOVERNOR

JACKSON 39201

WM. M. HEADRICK

COORDINATOR OF FEDERAL-STATE PROGRAMS

510 LAMAR LIFE BUILDING

TEL. (601) 354-7570

September 17, 1973

Mr. Donald Truesdell
Division of Marine Minerals (390)
U. S. Department of the Interior, Bureau of Land Managements
Washington, D. C. 20240

Dear Mr. Truesdell:

The proposed 1974 Outer Continental Shelf Oil and Gas General Lease Sale Offshore Louisiana has been reviewed by the concerned State agencies. At this time no State agency will have input into the draft environmental statement now under preparation.

We appreciate the opportunity to comment on this proposed action. We will review the statement when it is presented in October.

Sincerely,

Wm. M. Headrick
Wm. M. Headrick

b. Alabama

We received comments on the DES from Governor Wallace, the Alabama Development Office and the Ameraport Corporation.

Disposition

In the Alabama Development Office letter dated August 17, 1973, it is pointed out that some of our proposed tracts are in an area of interest for possible location of a deep water terminal facility. Legislation for licensing authority of deep water ports is pending. Location of any deep water ports will have to be coordinated with existing or potential offshore oil and gas development. This could result in a potential source of conflict, as Mr. Bamberg points out, and at this time must be identified as an unresolved issue.



STATE OF ALABAMA

GOVERNOR'S OFFICE

MONTGOMERY 36104

GEORGE C. WALLACE
GOVERNOR

REMARKS CONCERNING THE DRAFT ENVIRONMENTAL STATEMENT FOR THE PROPOSED 1973 OUTER CONTINENTAL SHELF OIL AND GAS GENERAL LEASE SALE OFFSHORE OF ALABAMA, MISSISSIPPI AND FLORIDA.

The proposed leasing of lands on the Outer Continental Shelf in the Gulf of Mexico offshore of Alabama, Mississippi and Florida for the purpose of development and production of possible oil and gas reserves is of major concern to the people of the State of Alabama. The people of this great State certainly have a need for energy and, obviously, there are only a few feasible ways that this need can be met. For instance, in August of 1972, I appointed the Ameraport Task Force to undertake efforts to establish a deep water terminal in the Eastern Gulf of Mexico for receiving the immediately necessary imported crude oil from supertankers.

Considering today's technology, the primary sources of energy currently available or available in the very near future are supplied by oil and natural gas. The energy issue is a complicated matter and it certainly cannot be taken lightly at the state level, much less at the national level. It is also difficult for us at the state level to determine the best economic allocation of the scarce natural resources that oil and gas represent. The continuing shortage of oil and natural gas will place an unnecessary burden on the shoulders of our citizens who can least afford to bear that burden. Therefore, I must conclude that the issue at hand is not a matter of whether we undertake the exploration and proving of our reserves, but that we must go about it now and do so in a manner that will provide the best safeguards that man is able to produce within this immediate time frame.

The exploration and proving of the reserves will certainly not alleviate the need for oil and gas in the next two to three years. However, it is a step that we must take for the succeeding years. We cannot prolong the current energy situation. The State of Alabama has vigorously pursued the use of its natural

resources for the benefit of mankind. In February of this year, I appointed an Alabama Energy Advisory Council to look at our energy resources and advise the State on the best use. These resources are used everywhere, but I would like to make special note of their use in agriculture. The production of agricultural products is not only necessary for the sustenance of life in the United States, but it continues to benefit this country in international trade.

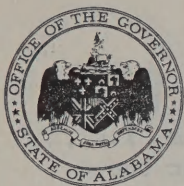
We can and indeed must develop our resources and do so with constant vigil for the environment. That vigil can never offer a perfect guarantee of the safety of our environment, but it can provide a high degree of probability that the interaction of man and his environment will not be permanently counter-productive. Man can progress and do so in a manner that his efforts at production can be both fruitful and environmentally fulfilling.

We can conserve and develop at the same time. State and local governments must share in the efforts to conserve and develop our assets by means that are pleasing to the senses, yet based on sound economic decisions. We must constantly weigh the alternatives and make the appropriate adjustments so that our many efforts will be mutually beneficial. Therefore, I would encourage the lease sales to continue and that at least the exploration and proving of the reserves be undertaken immediately.

9-3-73

Dated

George C. Wallace
George C. Wallace, Governor



George C. Wallace
Governor

STATE OF ALABAMA

ALABAMA DEVELOPMENT OFFICE

RECEIVED
AUG 20 5 08 AM '73

August 17, 1973
BUREAU OF LAND MGMT.
OUTER CONTINENTAL
SHELF OFFICE
NEW ORLEANS, LA.

R. C. "Red" Bamberg
Director

W. M. "Bill" Rushton
Assistant Director

Mr. George L. Turcott
Acting Director
Bureau of Land Management
Suite 2200 - The Plaza Tower
1001 Howard Avenue
New Orleans, Louisiana 70113

Dear Mr. Turcott:

Let me begin by stating that the contents of this letter are intended to be only a part of our formal response to your Draft Environmental Statement for the Outer Continental Shelf Sale No. 32. We will, indeed, be submitting written testimony in accordance with the announcement concerning the conduct and procedures of the public hearing, which will commence on August 21, 1973 in Tallahassee, Florida.

The information contained herein is to provide you with initial notice of the possible conflict of certain leased tracts with the proposed location of a deep water terminal in the eastern Gulf of Mexico which is named Ameraport. During the course of the Ameraport research a number of initial sites were studied and the preliminary environmental information regarding the siting of Ameraport is contained in the enclosed document entitled, "Alabama-Mississippi Superport (Preliminary Study)." In addition to the possible conflict of the superport site versus certain leased tracts, we must also express our concern for the navigation of very large crude carriers into the Ameraport site via the safety fairways. From our research, it would appear that safety fairway marked in color on the enclosed map needs to be clear of obstructions that would offer a navigational hazard to the very large crude carriers which are anticipated to draw as much as 110 feet of water. Because of the operating performance characteristics of the very large crude carriers, navigational standards in excess of those presently used for normal size ocean-going vessels may be required.

The above items which appear to conflict with the lease of certain tracts should not be construed as objection to the leasing of the Outer Continental Shelf per se. Indeed, the efforts to establish Ameraport stem from the same origin as the efforts to lease the Outer Continental Shelf for oil and gas

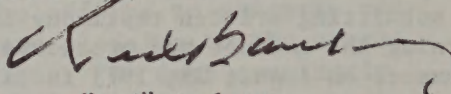
exploration and production. In this instance, the State of Alabama and the U. S. Government as represented by the Department of the Interior Bureau of Land Management are both trying to present solutions to the same problem, i.e., satisfying the growing demand for energy. Alabama's overall concern for the supply of crude oil to meet the national demand is evidenced from our work to establish a deep water terminal, which is documented in the enclosed publications entitled, "The Ameraport Interim Study" and the Ameraport Progress Report".

The State of Alabama likewise shares environmental concerns and will present another study undertaken by Ameraport to further identify the environmental issues. The publication entitled, "The Environmental Impact of Ameraport" by the Battelle Columbus Laboratories is a partial expression of our concern.

In accordance with the rules of this hearing the right is reserved to present additional written statements prior to September 4, 1973.

I am sure that we have raised a number of questions here that will require further discussion and, I want you to know that my staff, as well as the staff of Ameraport, are available to discuss any of these matters or any others that you feel are relevant to the Outer Continental Shelf lease and the location of a deep water terminal in the eastern Gulf.

Sincerely,



R. C. "Red" Bamberg
Director

RCB/dw

Enclosures



George C. Wallace
Governor

STATE OF ALABAMA

ALABAMA DEVELOPMENT OFFICE

September 4, 1973

R. C. "Red" Bamberg
Director

W. M. "Bill" Rushton
Assistant Director

RE: THE PROPOSED 1973 OUTER CONTINENTAL SHELF OIL AND GAS GENERAL
LEASE SALE OFFSHORE OF ALABAMA, MISSISSIPPI AND FLORIDA, DRAFT
ENVIRONMENTAL STATEMENT.

The Alabama Development Office is charged by State law to stimulate and coordinate the total development of the State's human, physical and economic resources. In carrying out these responsibilities, the Alabama Development Office is both a planning and an industrial development recruiting organization. At the same time, we are the State Clearinghouse and charged with the responsibility of conducting the review of environmental impact statements for the Governor's office.

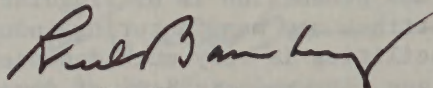
We are daily involved with environment, industry and planning. The proposed lease sale of the Outer Continental Shelf tracts for oil and gas development and production is of singular importance to Alabama. Alabama's efforts to attract new manufacturing industries and to expand existing manufacturing facilities is very much dependent upon an adequate supply of oil and natural gas. Any restrictions of domestic exports by other states, coupled with a restriction of foreign imports, would decelerate and quite possibly stagnate the full development of Alabama's potential. Many of our industries have reverted from coal and certain fuel oils to natural gas in compliance with the Environmental Protection Agency standards and those of the State air and water pollution agencies. These regulations have thus put a number of industries in a position of depending solely upon natural gas for their operations and those using electricity indirectly on the availability of natural gas and fuel oil. Industry, then, is in the position of having to bear the cost of protecting the environment and apparently is being asked to do so without passing the cost on to the consumer.

We recognize that the development and production of the possible offshore oil and gas reserves brings with it the attendant onshore development. The State and local governments certainly become involved in the structuring of the onshore development to ensure that the developments do not become permanently adverse to our environment. As a matter of fact, the ADO has been involved in an effort to locate a superport in the eastern Gulf. In our efforts, we have undertaken considerable environmental research not only offshore but onshore because of our recognition that the onshore development is cogent to whatever development takes place offshore.

We fully recognize that in any venture of mankind wherein he is pushing forward the frontiers of knowledge, he is taking risks. If we do reduce the amount of risk in any given undertaking, that risk is reduced by knowledge and that knowledge is gained by the quest for progress. Therefore, we cannot delay in our quest for progress. Energy itself is necessary, either directly or indirectly in the search for knowledge.

The United States is a high energy consumption nation. We can certainly take steps to reduce our consumption; however, any drastic reduction of the consumption would cripple our economy quite possibly to the point of a depression. That part of our population which would suffer, not only first, but most in any such reduction, would be those that can ill afford it. Because of our concern for our people, our environment, and our economy, we can only conclude that the full consideration of all the facts bearing upon this decision cannot yield but one result--that is, that we must proceed with deliberate aggressive actions to explore and prove the reserves in the eastern Gulf of Mexico. At the same time, I think it is imperative that the federal government recognize that those states which are adjacent to any offshore development and production should receive primary attention in the federal government's financial support to the states for development of coastal zone management programs.

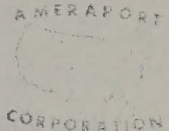
Respectfully submitted,



R. C. "Red" Bamberg

THE AMERAPORT CORPORATION

ALABAMA PLANNING TODAY TO SERVE THE NATION TOMORROW



September 4, 1973

Mr. Don Truesdell
U. S. Department of Interior
Bureau of Land Management
18th and C Streets, N.W.
Washington, D. C. 20240

Dear Mr. Truesdell:

Subject: REMARKS OF DR. JOHN E. MOELLER, EXECUTIVE
DIRECTOR, AMERAPORT CORPORATION CONCERNING
DRAFT ENVIRONMENTAL STATEMENT FOR THE PRO-
POSED 1973 OUTER CONTINENTAL SHELF OIL AND
GAS GENERAL LEASE SALE OFFSHORE OF ALABAMA,
MISSISSIPPI AND FLORIDA.

The Ameraport Corporation has recognized the need for imports of crude oil as part of the short-run solution to our energy needs. At the same time, we recognize the need for exploring and proving the possible oil and gas reserves on the Outer Continental Shelf off Alabama, Mississippi and Florida, because we believe, based on scientific study, that exploration and environmental safeguards are compatible. To this end, we offer to the Bureau of Land Management the results of our independent studies conducted by the Marine Sciences Environmental Consortium, the Alabama Geological Survey and the Battelle Columbus Laboratories, covering both offshore and on-shore environmental assessments of deep water ports, pipelines and attendant refinery and petro-chemical development. We recognize that offshore drilling will have a major influence on the adjacent shoreside, but are convinced through research that refinery development is compatible with every reasonable environmental safeguard. To this end we would invite attention to the Milford Haven project in Wales where five major refineries are located at Pembroke with no adverse environmental impacts. In fact, the total environment has been enhanced by their presence and the companies involved are probably the same companies which would be developing the east Gulf area, for they are all U. S. major firms with the exception of British Petroleum.

Mr. Don Truesdell

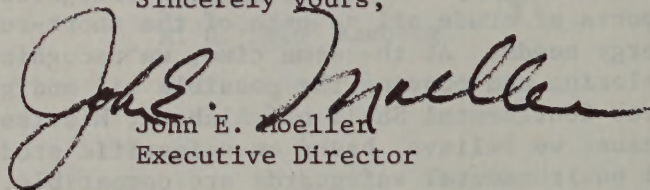
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9/4/73

We also see that the Outer Continental Shelf drilling has some of the same advantages as the importation of crude oil in very large crude carriers. That is the significant reduction of the number of tankers traversing the Gulf which should significantly reduce the probability of collision; hence, the diminution of spills. Should the production take place in the same general area as the deep water terminal site, it would provide the possibility of a common pipeline corridor for the offshore oil and the imported oil. However, the drilling platforms and other structures ought to be clear of the fairways for the very large crude carriers. In fact, there should be clearance requirements established around the superport to provide for safe navigation into and out from the offloading points.

To fail to recognize that offshore drilling is necessary to maintain the strategic position of the United States and at the same time is compatible with environmental safeguards, is a disservice to the entire Nation.

Sincerely yours,



John E. Moellen
Executive Director

/r

c. Florida

The State of Florida's Department of Administration referred the DES to 14 agencies for review and comment. Ten of these agencies responded with written comments, all of which are attached. Three agencies, the Department of Agriculture and Consumer Services, the Department of Commerce, and Department of State - Division of Archives, History and Records Management reported "no adverse comments" by telephone.

Each of the agencies who submitted written comments are discussed below:

(1) Department of Administration, Division of State Planning

This agency concludes that the DES is inadequate and does not satisfy the requirements of the NEPA and that the proposal has the potential to cause significant environmental damage to the State of Florida. Specific comments are addressed below:

Disposition

Pg. 2, para. 1 - The review comments on the draft environmental impact statement submitted by this agency reflect numerous comments received by the Department of the Interior which suggest that confusion exists as to the respective authorities of the Federal and state governments to regulate oil and gas activities on the Outer Continental Shelf and support activities which take place within state territorial waters and coastal lands incidental to such development of the OCS. So as to respond to comments received and to eliminate this confusion the following discussion summarizes the respective

jurisdiction of the Federal and state governments over activities which may ensue if a decision is made to offer for lease any or all of the tracts covered by this impact statement. While this discussion attempts to highlight all the areas of concern expressed in comments received, it is not intended to be a complete recitation of the legal authorities of the Federal and state governments with respect to all facets of operations incidental to oil and gas development. Furthermore, much of the statutory construction presented below has not been subject to judicial review and, therefore, different interpretations may well exist which cannot be finally settled until the conflicting interpretations have been before the courts for resolution.

A number of comments have been received recommending, among other measures, additional lease stipulations, cancellation of leases on certain conditions, stronger penalties for failure to comply with regulations, increased bonding requirements, and absolute liability for damages caused by oil spills. The jurisdiction of the Federal government over operations on the OCS and other statutory limitations set by Congress preclude implementation of some of these recommendations and conflicting policy considerations preclude implementation of others. As discussed elsewhere in this statement, however, some of these recommendations have been adopted for this proposed sale so as to improve the safety of operations and minimize their potential impact upon the environment.

The authority of the Secretary of the Interior to lease submerged lands on the Outer Continental Shelf followed by approximately eight years Proclamation No. 2667, September 28, 1945, issued by President Truman in which the Federal government of the United States, for the first time, asserted jurisdiction and control over the natural resources of the Continental Shelf. Though Executive Order No. 9633 issued on the same day as the Proclamation placed the natural resources of the subsoil and seabed of the continental shelf under the administrative custody of the Secretary of the Interior, it was not until 1953 that Congress conferred authority through the Outer Continental Shelf Lands Act, 67 Stat. 462, in the Secretary to issue leases for the extraction of these natural resources, and then only in the area of the Outer Continental Shelf. Two months prior to conferring this authority upon the Secretary, the Congress had declared in the Submerged Lands Act, 67 Stat. 29, that title and ownership of lands beneath navigable waters within State boundaries, and the natural resources therein were to be vested in the respective states and that they had the right and power to manage and administer those lands and natural resources. These two statutes make it necessary that the geographic boundary between Federal and state jurisdiction over submerged lands beyond our coastline be kept in mind when the authority of Federal and state governments to regulate offshore oil and gas operations is discussed.

In discussing the authority to regulate onshore activities incidental to OCS oil and gas operations, the historic sovereign and proprietary rights of the states must be recognized. In addition, the traditional police powers of the states to protect the health, safety and welfare of their citizens has a role to play in the regulation of these activities. Thus, much of the regulation of onshore activities is under the jurisdiction of the states, particularly as to local land use and the socio-economic impacts of these activities. The Federal Government, under rights reserved to it in the Constitution, has statutory authority to control certain activities, pollution of air and water being one of these. Often this control takes the form of Federal approval of state plans and programs, the implementation of which is left to the states.

The Outer Continental Shelf Lands Act authorizes the Secretary to grant leases for submerged lands on the Outer Continental Shelf. 43 U.S.C. § 1334(a)(1). In addition, he may at any time prescribe and amend rules and regulations necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the OCS, and the protection of correlative rights therein. 43 U.S.C. § 1334(a)(1). This is the basic authorizing language for the operating regulations found in 30 CFR Part 250, and the OCS Orders implementing these regulations. The language of the section of the Act under discussion here provides specifically

for regulations to suspend operations or production when in the interest of conservation. This authorization is implemented at 30 CFR 250.12 wherein the supervisor may suspend operations or production: (1) if such operations or production threaten harm or damage to life, including aquatic life, to property, to leased deposits, to other mineral deposits or to the environment; (2) if needed for proper development of the lease; (3) if transportation facilities to shore are absent; or (4) if the lessee fails to comply with applicable law, the lease terms, the operating regulations, OCS Orders, or other written order or rule. This suspension authority is often felt to be more effective in correcting potentially dangerous operating deficiencies than the penalty provisions which are applicable to knowing or willful violations of rules or regulations. Suspensions halt operations or production until the deficiencies are corrected. The resulting delay may be more costly to a company than a maximum \$2,000 fine would be.

In addition to the authority to suspend operations to correct potentially dangerous situations, the Secretary has the authority mentioned above to refer a knowing and willful violation of rules and regulations to the Department of Justice for prosecution as a misdemeanor. 43 U.S.C. § 1334(a)(2). If a conviction is obtained the violator is punishable by a fine of not more than \$2,000, or by imprisonment for not more than six months, or by both a fine and imprisonment. Each day

the violation continues is deemed a separate offense. Comments have been made that such fines are an ineffective deterrent to the large companies operating on the OCS and, therefore, that the fines should be substantially increased. To the extent that there may be merit in this proposal, the remedy must be sought through congressional amendment of the statute. Without this amendment no authorization exists to increase the amount of the fine. It is worth noting in passing that some individuals have suggested that the real deterrent force inherent in this penalty provision is not the size of the fine so much as the attendant adverse publicity and unfavorable mark on the company's safety record that may be associated with this fine.

Further augmenting the Secretary's recourse against a lessee is the authority to cancel leases for failure to operate a lease in compliance with the safety and environmental protection measures incorporated in the Department's operating program. 43 U.S.C. §§ 1334(b)(1) and 1334(b)(2). These subsections apply to nonproducing and producing leases respectively. Grounds for cancellation are essentially the same in either case; a failure to comply with any of the provisions of the Act, the lease, or the regulations issued under the Act. The Act requires a thirty day notice before cancellation of a nonproducing lease. The same requirement is applied to producing leases by the terms of Section 10 of the lease. Judicial review in the U.S. District Court for the District of Columbia of the cancellation of

nonproducing lease is authorized. Cancellation of a producing lease is accomplished by an appropriate proceeding in a U.S. District Court with jurisdiction over the controversy.

Comments have been made to the effect that leases should be cancelled if an oil spill or blowout results from operations on the lease or if the lessee's operations fail to comply with applicable environmental protection laws. If the blowout or oil spill results from failure to comply with the terms of the Act, the operating regulations, or the lease terms, the Secretary may cancel a nonproducing lease subject to judicial review or institute judicial proceedings to cancel a producing lease. 43 U.S.C. §§ 1334(b)(1) and 1334(b)(2). If operations fail to comply with applicable environmental laws the Secretary may also cancel the lease. The Act specifies that the lease may be cancelled for failure to comply with the terms of the lease. The Secretary is given broad discretion to prescribe terms and provisions of the lease. 43 U.S.C. § 1337(b)(4). Pursuant to this authorization the lease states that all operations under the lease must be conducted in accordance with applicable law and regulations. Thus, failure to comply with applicable environmental protection laws and regulations would subject the lease to cancellation under the terms of the Act.

It should be observed that the Secretary has been given discretion to cancel leases under circumstances described above whereas comments

have suggested that the cancellation be mandatory. A mandatory cancellation requirement is not desirable from a management standpoint because factors may dictate that operations on the lease should continue. The oil spill at Platform A on lease OCS-P 0241, Santa Barbara Channel, January 28, 1969, is an example of a blowout for which mandatory cancellation would not be desirable. Had the lease been cancelled the recommendations of the BuBridge Panel, appointed by the President, concerning the reduction of seepage through fractures in the ocean floor could not have been implemented. Lease cancellation must be a discretionary function of the Secretary so that the decision can be made in the context of what is most appropriate to the proper management, conservation and protection of the resources.

Under the authority to prescribe regulations to carry out the leasing requirements of the Act and for the prevention of waste and conservation of the natural resources of the Outer Continental Shelf regulations have been promulgated establishing bonding requirements for lessees, 43 CFR 3304.1, 3304.2, and liability for oil spills resulting from operations, 30 CFR 250.43. Comments received by the Department have suggested that the amount of the required bonds should be increased and that absolute liability for oil spills resulting from operations should be extended to include damages suffered by state and local governments and third parties as a result of such spills. Furthermore, a mechanism should be created whereby third party damages could be assessed and collected expeditiously from the party causing the spill.

The bonding regulation is intended to implement the statutory requirement that the successful bidder be one who is responsible and qualified. 43 U.S.C. § 1337(a). The bond is conditioned upon compliance with all the terms of the lease. For an individual lease the bond must be in the amount of \$50,000 or the lessee may furnish a \$300,000 bond to cover all the leases he may hold within a given geographical area specified in the regulation. The right is reserved to the United States to require additional security in the form of a supplemental bond or bonds or to increase the coverage of an existing bond if, after operations or production have begun, need for such additional security becomes apparent.

The reservation of this right meets to some degree the criticism that bond amounts are too low. If, after operations have commenced, information is available that makes evident the need for larger bonds to serve as surety for a failure to comply with the terms of a lease, the Department could require that additional bonds be furnished as a condition for conducting further operations. On the other hand, no limitation on the amount of bonds is set by the OCS Act. Thus, the amount of the initial bond required by 43 CFR § 3304.1 could be increased by an amendment to that regulation. Differing policy considerations within the discretion of the Secretary bear upon any decision to increase the amount of the initial bond.

The lessee is required to bear the expense for the control and total removal of pollutants proximately resulting from drilling or production operations conducted by or on his behalf. 30 CFR § 250.43(b). The absolute liability for the costs of cleaning up a spill does not extend to damages suffered by third parties as a result of the spill. The regulation provides that the lessee's liability to third parties is governed by applicable law.

The applicable law which will govern liability to third parties will vary depending upon the locus of the damage suffered and the scope of the law's coverage. Adjacent state civil and criminal laws effective as of August 7, 1953, date of enactment of the OCS Act, to the extent that they are applicable and not inconsistent with the OCS Act or other Federal laws and regulations of the Secretary apply to operations on the Outer Continental Shelf and are administered and enforced by appropriate officers and the courts of the United States. Common law remedies recognized by judicial decisions would also be applicable where statutory remedies are not available. The common law of torts could provide remedies in appropriate circumstances under theories of strict liability based upon ultrahazardous activities, res ipsa loquitor, negligence and nuisance.

The imposition of absolute liability for damages suffered by third parties may perhaps be possible under the terms of the OCS Act. The Act provides that the Secretary may at any time prescribe regulations

he deems necessary and proper to prevent waste and conserve the resources of the Outer Continental Shelf. 43 U.S.C. § 1334(a)(1). It should be recognized, however, that the imposition of such a regulation, even if it is possible under the statute, is a discretionary matter on which many factors have a bearing. If objections were raised to the imposition of such a regulation, the appropriate court would have to decide if such a regulation were intended to prevent waste and conserve the natural resources of the Outer Continental Shelf.

Comments have suggested that such a regulation should be established along with a mechanism to assess and collect third party damages expeditiously from the party causing the spill. While authority for this regulation may be found in the Act, no authority is apparent for the creation of what would amount to an adjudicatory or arbitration mechanism. The only authorized recourse would be through the district court having jurisdiction over the controversy. 43 U.S.C. § 1333(b). To establish a different means to assess the amount of liability would require congressional amendment of the OCS Act.

Pg. 2, para. 4 - A description of offshore support facilities and impacts has been included in the FES, see Vol. 2, Sec. III.H. In addition, a BLM staff report concerning these matters has been prepared and will be made available upon request.

The effect this proposed sale will have on the military installations in the area has been determined by the Department of Defense. In a Fact Sheet released by DOD on September 12, 1973 it is stated:

"The only activity which may have to be moved are the two Navy underwater acoustic platforms of the Panama City Naval Coastal Systems Laboratory near Tyndall AFB. The number of employees that would be involved are approximately 10. Examination is now being made as to the most suitable place for relocation. If they must be moved the estimated cost of the move would be approximately \$400K.) [sic]

See Vol. 5, Attachment I for full text of DOD's statement.

Intentional disposal of mud and drilling materials is discussed in the FES - see Vol. 1, Sec. I.F.3.b.; Vol. 2, Sec. III.A.1.a. It should also be pointed out that EPA administered National Pollution Discharge Elimination System (NPDES) permits will apply to offshore operations. In addition, see Vol. 1, Sec. I.H.5. Phase II which describes a study plan that will include monitoring of the effects of disposal of drill cuttings, sand, muds and all potential pollution sources discharged from lease sites.



STATE OF FLORIDA

Department of Administration

Division of State Planning

725 SOUTH BRONOUGH

TALLAHASSEE

32304

(904) 488-2401

Reubin O'D. Askew
GOVERNOR

L. K. Ireland, Jr.
SECRETARY OF ADMINISTRATION

Earl M. Starnes
STATE PLANNING DIRECTOR

September 7, 1973

Mr. George L. Turcott
Acting Director
Department of Interior
Bureau of Land Management
Division of Marine Minerals
Washington, D.C. 20240

Dear Mr. Turcott:

Functioning as the state planning and development clearinghouse contemplated in U. S. Office of Management and Budget Circular A-95, we have reviewed the following draft environmental impact statement:

U. S. Department of the Interior - Proposed 1973 Outer Continental Shelf Oil and Gas General Lease Sale Offshore Mississippi, Alabama, and Florida. OCS Sale Number 32. SAI Number 74-0056-E.

During our review we referred the environmental impact statement to the following agencies, which we identified as interested in the project: Department of Agriculture and Consumer Services; Board of Trustees of the Internal Improvement Trust Fund; Department of Community Affairs; Department of Commerce; Game and Fresh Water Fish Commission; Department of Health and Rehabilitative Services; Department of Legal Affairs; Department of Natural Resources; Department of Pollution Control; Department of State - Division of Archives, History and Records Management; Department of Transportation; and to the Environmental Information Center; Florida Chapter of the Sierra Club and Hillsborough County Environmental Coalition. Agencies were requested to review the statement and comment on possible effects that actions contemplated could have on matters of their concern.

Letters of comment on the statement are enclosed from the Board of Trustees of the Internal Improvement Trust Fund; Department of Community Affairs; Game and Fresh Water Fish Commission; Department of Health and Rehabilitative Services; Department of Legal Affairs; Department of Natural Resources; Department of Pollution Control; Department of Transportation; Sierra Club and Hillsborough County Environmental Coalition. The Department of Agriculture and Consumer Services; Department of Commerce; and Department of State - Division of Archives, History and Records Management reported "no adverse comments" by telephone.

Mr. George L. Turcott
Page Two
September 7, 1973

In addition to the regular review of this statement, a representative of this agency attended public meetings on the proposal held in Panama City on May 25, and St. Petersburg Beach on July 28, and the public hearings held in Tallahassee August 21 through 23. The statement was also discussed among state agencies at a conference called by this agency on August 17. A conference attendance list is enclosed.

This agency has reviewed the draft environmental impact statement and considered all the information provided by reviewing agencies, public meetings and the conference. It is our conclusion that: (1) the environmental impact statement is inadequate, and therefore does not satisfy the letter or spirit of the National Environmental Policy Act, because the following areas are not discussed to the fullest extent possible: (a) alternatives to the proposed action - the statement lacks thorough discussion of other reasonable alternative energy sources; (b) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity - the statement fails to adequately appraise the possible long-term direct effects or the secondary effects of the proposal on natural resources, land use, and socio-economic characteristics of the State and all other possible environmental dangers, as compared to the benefits which are short-termed. This portion of the statement needs to be given considerable thought; (c) any irreversible and irretrievable commitments of resources which would be involved in the proposed action, should it be implemented - the statement makes a minimal attempt to evaluate the vast complex of secondary and tertiary effects on nearshore and onshore natural and socio-economic activities; and (2) implementation of this proposal has the inherent potential to cause significant environmental damage to this State and thus could conflict with the policy of the State as set forth in the State Constitution, to protect and conserve the natural resources and scenic beauty of the State.

Florida is fully aware of the needs for additional energy sources and is desirous of seeing these important national objectives sought. However, the State must also consider its own well being, and therefore cannot endorse this proposal unless and until the questions which have been submitted in the enclosed letters and at the public hearings have been satisfactorily answered and certain safeguards and assurances are provided as discussed in the following two paragraphs.

Questions regarding related facilities and their effects on natural and socio-economic systems need to be answered. The State would object in principle to the commitment of large amounts of estuarine and other coastal resources to oil and gas production support facilities and activities; for these resources are basic to the natural and socio-economic environment of the State. The State would like assurances that the proposed sale would not curtail operations of the military installations located in Bay and Okaloosa Counties upon which a sizable portion of these Counties economies depend. Further, it would oppose the proposal should further study, as is obviously necessary in regard to effects of disposal of mud and other drilling waste material, reveal that serious long-term degradation to the Gulf or coastal zone would occur.

Mr. George L. Turcott
Page Three
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Stringent regulations need to be placed on all operational and transportation activities with effective penalties for violations. Lease stipulations should include considerations of providing for mandatory cancellation of leases for oil spills or blow-outs and absolute liability for damage caused. Safety standards, procedures, equipment, and personnel need to be reevaluated with the objective of developing a fail-safe extraction and transport system.

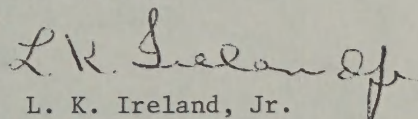
We are of the strong belief that a hasty decision on this proposal could be a serious mistake. There are too many unknowns relating to possible effects on Florida's natural environment and its economy to act hurriedly without adequate knowledge. The information provided indicates that the possible adverse effects to this State may outweigh the possible benefits. This is apparently because the benefits are clearly outlined but not all of the adverse effects were thoroughly evaluated and defined.

If notwithstanding these comments, this lease sale proceeds rapidly without having provided the State evidence of having complied with its requests, it should be made clear that the State will necessarily through its permitting and other regulatory capabilities, view those activities which are related to the support and transport of these products with great concern.

In accordance with the Council on Environmental Quality guidelines concerning statements on proposed federal actions affecting the environment, as required by the National Policy Act of 1969, and U. S. Office of Management and Budget Circular A-95, this letter, with attachments, should be appended to the final environmental impact statement prepared on this project. Comments regarding this statement and project contained herein or attached hereto should be addressed in the statement.

We request to be forwarded ten copies of the final environmental statement prepared on this project.

Sincerely,


L. K. Ireland, Jr.

LKIjr/Swp
Enclosures

cc: Honorable Reubin O'D. Askew
Honorable Thomas D. O'Malley
Honorable Richard Stone
Honorable Floyd T. Christian
Honorable Robert L. Shevin
Honorable Doyle Conner
Honorable Fred O. Dickinson, Jr.

Mr. George L. Turcott
Page Four
September 7, 1973

Honorable Lawton M. Chiles
Honorable Edward J. Gurney
Honorable Bob Sikes
Honorable Don Fuqua
Honorable Charles E. Bennett
Honorable Bill Chappell, Jr.
Honorable Louis Frey, Jr.
Honorable Sam M. Gibbons
Honorable James A. Haley
Honorable C. W. Young
Honorable Paul G. Rogers
Honorable J. Herbert Burke
Honorable Claude Pepper
Honorable Dante B. Fascell
Mr. John Bethea
Mr. Charles Blair
Mr. Randolph Hodges
Mr. Joel Kuperberg
Mr. Ray L'Amoreaux
Mr. Robin Lewis
Mr. William Partington
Mr. Emmett Roberts
Mr. David H. Scott
Mr. R. Charles Shepherd
Mr. H. E. Wallace
Mr. Robert Williams
Mrs. Ellen Winchester

(2) Board of Trustees of the Internal Improvement Trust Fund

This agency recommends that additional alternatives be considered and presented in a revised draft to be resubmitted for public review, and expresses the opinion that a "just decision...cannot be made until the numerous unknown effects are determined".

Disposition

- Pp. 2-4 - In response to this agency and other agencies' review comments we have expanded the alternatives volume of the FES to include additional energy sources. See especially Vol. 3, Sec. VIII. B. 8.
- Pg. 4, item 2 - See Vol. 2, Sec. III. H. for a discussion of effects of onshore facilities. Exact locations for any onshore facilities will be subject to appropriate state and local controls and to any land use priorities the state wishes to exercise. The policies and land use priorities of the three States in the area of this proposed sale were reviewed in preparation of the DES, in preparation of the FES, and in preparation of a BLM staff report concerning potential on-shore development, secondary to, but resulting from our proposed action.
- Pg. 4, item 3 - The effect of chronic oil spills on fish is unknown and, therefore represents an unresolved issue in the FES. However, see the study plan in Vol. 1, Sec. I. H. 5. which will include an extensive investigation of the effect of chronic oiling on flora and fauna.

Effect of debris, spilled oil and other matters is considered in Vol. 2, Sec. III. G. 2. b. with relation to scenic values.

The number and volume of spills resulting from this sale has been predicted. See Vol. 2, Sec. III. A. 2. b.

See Vol. 1, Sec. I. F. 3. b. concerning barium in drilling muds.

The effect of potential smog-producing hydrocarbons released from evaporating oil spills is unpredictable and remains an unresolved issue at this time.

The effect of unburied pipelines on trawling activities is discussed in Vol. 2, Sec. III. D. 2. There will not be any unburied common carrier pipelines resulting from this sale offshore Florida.

There will not be any common carrier pipelines in water depths beyond a 200 foot contour offshore Florida. See also Vol. 2, Sec. IV. C. & D. establishing pipeline corridor routes for this proposed sale area. There has never been any reported damage to unburied pipelines resulting from shrimp-trawling operations on the OCS that we are aware of.

Hazards to boats from floating debris are discussed in Vol. 2, Sec. III. E.

Proposed routes for pipelines are discussed as they relate to industry interest (Vol. 1, Sec. I. F. 4. d.) and to Department of the Interior intentions (Vol. 1, Sec. I. H. 5. and Vol. 2, Sec. IV. C.)



STATE OF FLORIDA

BOARD OF TRUSTEES OF THE INTERNAL IMPROVEMENT TRUST FUND

ELLIOT BUILDING — TALLAHASSEE, FLORIDA 32304

Joel Kuperberg
Executive Director

TELEPHONE 488-8123

August 23, 1973

Mr. Edgar E. Maroney, Chief
Bureau of Intergovernmental Relations
Department of Administration
Division of State Planning
725 South Bronough
Tallahassee, Florida 32304

DIVISION OF STATE PLANNING,
Bureau Of
Intergovernmental Relations

AUG 24 1973

RECEIVED

Dear Mr. Maroney:

Draft Environmental Statement on the
Proposed 1973 Outer Continental Shelf SAI NO. _____
Oil and Gas General Lease Sale Offshore
Mississippi, Alabama and Florida,
SAI Project Number 74-0056-E

The Trustees' staff has reviewed the above environmental impact statement and submits the following comments:

The spirit and intent of an environmental impact statement is to present a sufficient amount of information concerning a project's effect on the environment so that a decision to proceed with, delay, or cancel the project can be made judiciously. We feel that the items described below were not adequately treated to allow valid analysis and a just decision to be made. Because of the many areas in which knowledge is lacking, our staff feels that the draft is not ready for finalization. We recommend that the following issues be studied and presented in a revised draft to be re-submitted for public review.

1. Alternatives to the Proposed Action.

This section is quite thorough in treating the ten alternatives the authors consider important. However, it does not even mention several other important alternatives except to dismiss them as insignificant.

Mr. Edgar E. Maroney
Page Two
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We find this treatment of alternatives unacceptable. Solar power, wind power, and other "renewable energy sources must be taken seriously. In view of the following statements made by Wilson Clark of the Environmental Policy Center in Washington, D. C., we feel that any discussion of alternative energy sources is inadequate if the following, ecologically sound energy sources are dismissed as insignificant.

Solar Energy

"The technology for converting sunlight to useful forms of power is well known. Solar power can provide electricity (and does so on satellites and remote power stations already) and heat, not just low-grade for running air-conditioners and space heaters for buildings and houses but also high-grade heat over 1000 degrees Fahrenheit for scientific and industrial applications.

Over two dozen houses using solar energy for space and water heating have been operated in the U. S. Solar heating systems for residences in most areas of the U. S. would be cheaper now than electric heating. As opposed to nuclear power, which has gotten billions of federal dollars, solar heating and cooling has gotten much less than one percent of the nuclear total. Yet solar energy can provide dependable power for buildings' heating/cooling systems. In addition, while the costs of solar energy can't rise, since the energy is free and limitless, nuclear power costs go up every day.

To implement solar power involves no great technological breakthrough. It is primarily a plumbing problem, or as one solar engineer put it, "It's the most trivial kind of technology imaginable."

Engineering studies are underway at the University of Arizona and the University of Minnesota of sophisticated solar collectors which can provide high-temperature heat which could drive electrical turbines, or produce gaseous fuels. Currently, the extent of federal funds for these projects is less than the cost of writing the environmental impact statements for projected nuclear power plants.

Wind Power

Engineering Professor William Heronemus of the University of Massachusetts has proposed the construction of a network of electricity-producing wind generators on the oceanic continental shelf of the northeastern U. S. The generators would produce electricity, either for direct use, or for powering electrolyzers to produce hydrogen for fuel. He contends that windpower would produce electricity in 1990 in New England for 2.51 cents per kilowatt hour, compared to 2.72 cents per kilowatt hour for electricity produced by nuclear or fossil-fueled power plants. The generating stations would be enormous, but would be located out of sight of land, and the energy would be piped in. According to Mr. Heronemus, "the technical soundness and the scientific basis for windpower has been established for centuries--only low-cost fuel and cheap heat engines could drive it out of popular practice."

Sea-Thermal Power

The sea-thermal power plant operates on the temperature differences between deep, cold ocean water and surface, hot ocean water. The power plant uses this temperature difference as "fuel" to produce heat to drive electrical turbines. According to engineer James Anderson of York, Pennsylvania, such plants could produce electricity cheaper than any other known power plant. Such plants would be located along the Gulf Stream in the Atlantic Ocean.

Geothermal Power

Of all environmentally acceptable power technologies, geothermal power is the most developed. Geothermal power, the earth's heat, is brought to the surface to drive an electrical turbine, or supply heat for other purposes. It is being used successfully in many countries, including the U. S., where enormous reservoirs exist in the southwest."

In dealing with a shortage of finite reserves, development of "renewable" energy sources is the very obvious answer. No matter how much care is taken to protect the environment during exploration, extraction and transport or how much new technology is developed, our fossil fuel reserves are very limited and will soon run out. We should be treating

Mr. Edgar E. Maroney
Page Four
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them as reserves in the true sense of the word, instead of developing ways to gobble them up at faster and faster rates.

2. Onshore facilities

The statement indicates that no new refineries will be constructed as a result of this sale. However, pipeline terminals, gas treatment facilities, storage terminals, transfer terminals and support facilities will be required in the coastal area of Florida. Waterfront or coastal locations for these numerous onshore facilities will cause direct conflict with county and state priorities on land use as well as environmental considerations of land that should not be developed at all (see Florida Coastal Coordinating Council maps). The authors seem to be unaware of the conflict that will arise and perhaps should review the policies of various state agencies regarding waterfront and coastal land development.

3. Various other factors are mentioned with the admission that "the effect is unknown at this time." Listed below are only a few of these inadequately treated items:

Effects of chronic low-level oil spills on fish in a sport and commercial fishing area was not assessed.

Effect of spilled oil and debris on scenic values of a tourist area was not determined.

Number and volume of spills cannot be predicted.

Barium compounds in drilling muds present a serious but as yet undetermined threat to aquatic life.

The effect of smog-producing hydrocarbons released from evaporating oil spills is as yet unpredictable.

Effect of unburied pipelines on shrimp-trawling operations and vice versa, was not assessed.

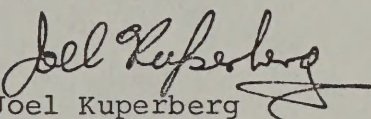
The hazard of floating trash (drums, cans, wood, plastic sheeting, steel, plastic ropes) to boats of all sizes was not assessed.

Mr. Edgar E. Maroney
Page Five
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Proposed routes for pipelines and amount of dredging anticipated were not examined because the exact locations of production have not been delineated.

The proposed leasing is a non-reversible environmentally harmful activity. A just decision to proceed with such activity should not and cannot be made until the numerous unknown effects are determined. Thus, we recommend that a revised draft be submitted for further review before a final statement is attempted.

Sincerely,


Joel Kuperberg
Executive Director

JF/vbs

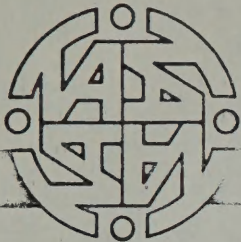
(3) Department of Community Affairs, Division of Technical Assistance

This agency expresses concern with regard to the onshore activities that will result from this proposed sale and its responsibilities for comprehensive coastal planning. It recommends that BLM be more specific with regard to site locations of onshore support facilities. It expresses concern for lack of data concerning economic effects the proposed sale will have on Florida's tourist industry. It recommends that the sale be delayed until the results of detailed studies are available.

Disposition

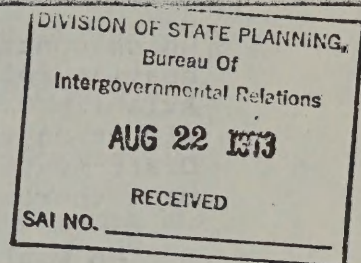
See Vol. 1, Sec. I. F. 4. concerning product transportation systems and Vol. 2, Sec. III. H. for land use and socio-economic effects in the coastal zone. These sections plus BLM's staff report prepared in New Orleans represents the most specific information we have at this time concerning onshore development activities that may result if our proposed action proceeds.

A delay of the proposed sale until studies can be completed is presented as an alternative - see Vol. 3, Sec. VIII. C. 2. Also see Vol. 3, Sec. VIII. C. 3. for consideration of delaying the sale pending development of land use and growth plans onshore.



State of Florida
Department of Community Affairs
DIVISION OF TECHNICAL ASSISTANCE

Reubin O'D. Askew, Governor
Edward J. Trombetta, Secretary
R. Charles Shepherd, Director



August 20, 1973

Mr. Edgar E. Maroney, Chief
Bureau of Intergovernmental Relations
725 South Bronough Street
Tallahassee, Florida 32304

Re: EIS for Outer Continental Shelf Oil and Gas
Lease Sale, SAI 74-0056-E

Dear Mr. Maroney:

Staff has review the U.S. Department of Interior Environmental Impact Statement. We feel that the Draft is considerably lacking in detail, especially as to the effect on the coastal communities of the future drilling, oil and gas transport, ports and refineries' location.

At this time this Department is coordinating the comprehensive planning programs of 12 Gulf Coast Counties and working with or coordinating through regional agencies' programs. Question immediately arises as to how the planning should be conducted in relation to the proposed project. For example, should the plan for Gulf County include the possibility of Port St. Joe being chosen as a terminal? With the lack of such detailed information, it is difficult to advise the consultants and local officials. We would recommend that the Bureau of Land Management be more specific in these potential problem areas.

We have made no attempt to comment on the proposed project in the specific areas that are beyond the scope of our responsibilities. However, we would support the comments of the Department of Pollution Control and the Florida Coastal Coordinating Council.

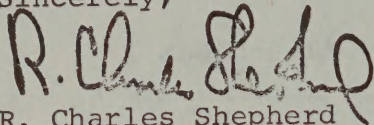
Florida's economy is greatly dependent upon the wise utilization of its natural resources. The tourist industry

Page Two
August 20, 1973

which contributes heavily to the economy is in turn heavily related to the state's beaches and Gulf or Atlantic Ocean waters. Projects, which may have serious effect on the economy, must be studied thoroughly. The Draft statement does not present enough solid facts to make thorough consideration.

We would recommend that the lease sale be delayed until the results of further detailed studies are made known.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. Charles Shepherd". The signature is stylized with a large, looped "R" and a long, sweeping underline.

R. Charles Shepherd
Director

RCS/lmp

(4) Florida Game and Fresh Water Fish Commission

This agency expresses concern for the effect this sale will have on land use and planning which are closely tied to the fate of Florida's wildlife. This agency presents an interesting and perceptive philosophical discussion concerning the dilemma between changing man's environment to suit his need for short-term benefit and changing his needs to fit his environment for long-term benefit.

Disposition

See our preceding response to the Division of Technical Affairs concerning information presented in the FES and elsewhere with regard to land use. Also see Vol. 2, Sec. VI. concerning the relationship between local short-term use and maintenance and enhancement of long-term productivity.

whet

FLORIDA GAME AND FRESH WATER FISH COMMISSION

HOWARD ODOM, Chairman
Marianna

OGDEN M. PHIPPS, Vice Chairman
Miami

E. P. "Sonny" BURNETT
Tampa

O. L. PEACOCK, JR.
Ft. Pierce

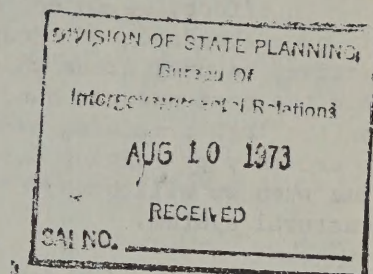
JAMES B. WINDHAM
Jacksonville

DR. O. E. FRYE, JR., Director
H. E. WALLACE, Assistant Director



FARRIS BRYANT BUILDING
620 South Meridian Street
Tallahassee, Florida 32304

August 9, 1973



Mr. E. E. Maroney, Chief
Bureau of Intergovernmental Relations
Department of Administration
725 S. Bronough Street
Tallahassee, Florida 32304

Re: SAI #74-0056, DEIS
1973 Outer Continental Shelf Oil
and Gas General Lease Sale, Offshore
Mississippi, Alabama and Florida

Dear Mr. Maroney:

We have reviewed the environmental impact statement concerning the proposed offshore oil and gas lease sales. We haven't had sufficient time to adequately perform an indepth, detailed analysis of the voluminous data covered by this statement nor do we have the personnel to effectively evaluate all facets of this report. A brief review, however, indicates that considerable time and effort was expended in examining the tremendous number of potential impacts of wide-spread drilling, transportation and processing of offshore gas and oil.

We are concerned, of course, with the direct effects that these leases will have on fish and wildlife in the Gulf of Mexico and adjacent land areas. The impact statement seems to do a creditable job of predicting these effects based on past statistics and our present knowledge of wildlife requirements.

Unfortunately, the impact statement does not cover the single most important effect of these leases on wildlife. The fate of our remaining wildlife is closely tied to land use, yet we do not know what impact these additional 360-590 thousand barrels of oil per day from new leased areas will have on our society and its land use problems. The great efforts made by industry and government to continue to meet this nation's energy "demands" could actually be contributing to our problems in land use and planning. Before massive quantities of fossil fuel energy were made available to man he usually had to work within the constraints of the natural system. He was forced to respect floods and storms, forced to follow the contours of the land and prevented from exploiting areas where the energy of man and beast was insufficient to provide economical access.

Mr. E. E. Maroney
August 9, 1973
Page two

SAI #74-0056

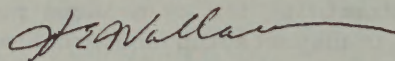
The abundant energy that we now have has served to upgrade our standard of living but it has fostered a feeling of ecological "manifest destiny" -- that man is destined to exert his will over natural systems and remold them to his greatest short term benefit.

In effect, we do not have an energy shortage, we have "energy pollution". Our over abundance of cheap energy has resulted in damage to many of our productive, natural areas which could have provided many more benefits to mankind over the next several hundred years if left alone and protected. By searching for the last remaining hydrocarbon deposits to feed our insatiable appetite, we are only prolonging our present unwise land use patterns and delaying the time when we will have to face the problem of living within the constraints of a natural system.

The effects of cheap energy on our people and our lands will be far more important than the localized oil spills, pipeline breaks and tanker accidents which are so well covered in this impact statement. We are in an era when we must consider not only the immediate results of our actions but also the long term effects. We must look at the sociological and ecological impact of oil consumption in addition to oil extraction and processing.

These comments must not be interpreted as being against petroleum exploration and exploitation. We do feel, however, that this oil may be of much higher value to us in ten, fifty or three hundred years when it will not be blindly consumed in an effort to sustain a way of life which has indications of eventually being self destructive, and which is certainly resulting in the rapid loss of many natural benefits, including wildlife.

Sincerely,



H. E. Wallace
Assistant Director

HEW:BH:ph

(5) Department of Health and Rehabilitative Services

This agency recommends that strict safety precautions be taken to prevent oil spills and that oil spill clean-up equipment be "instantly available".

Disposition

In addition to the extensive OCS regulations and operating orders that prescribe safety measures see also our discussion of the National and Regional Oil and Hazardous Substances Pollution Contingency Plans (Vol. 2, Sec. IV. A. 4.) and the industry oil spill response consortium, Clean Gulf Associates (Vol. 2, Sec. IV. A. 4.). Also see the inventory of oil spill containment and cleanup equipment available in the Gulf of Mexico (Vol. 5, Attachment L.) and our proposed stipulations for a maximum 12-hour oil spill response time for attachment to all leases that issue from this sale (Vol. 2, Sec. IV. D. 1.). It is also pointed out that at the public hearing concerning this proposed sale, held in Tallahassee, Florida on August 21-23, 1973, Mr. Claude Golay, Chairman of Clean Gulf Associates stated:

"...the Board of Directors has already authorized the purchase of two new fast response units at the time this proposed Federal lease sale off Mississippi, Alabama and Florida is approved and officially announced in the Federal Register. These units will be strategically stationed in the northeast Gulf of Mexico."

STATE OF FLORIDA

DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

Prior Notification and Review System

Emmett S. Roberts
Secretary

Date: August 17, 1973

MEMORANDUM

REF. NO: DHRS _____ SPDC (SAI) 74-0056 E

TITLE Draft E.I.S. Proposed 1973 Outer Continental Shelf Oil & Gas
General Lease Sale - Offshore Mississippi, Alabama, and Florida
APPLICANT U.S. Department of the Interior

TO: Kenneth Ireland, Secretary
Department of Administration
E. E. Maroney
Attn: ~~XXXXXX~~, Chief
Bureau of Intergovernmental Relations

FROM: Emmett S. Roberts, Secretary
Department of Health and Rehabilitative Services

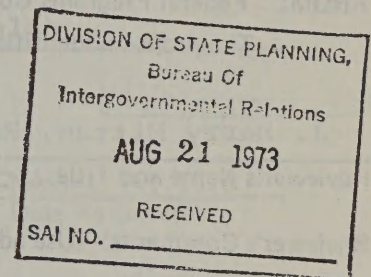
By: Division of Planning and Evaluation

SUBJ: NOTIFICATION OF INTENT TO APPLY FOR FEDERAL FUNDS

The project identified above has been reviewed in accordance with O.M.B.
Circular A-95. Action recommended:

- ☐ The project is consistent with the goals and objectives of the Department of Health and Rehabilitative Services. Favorable action is recommended.
- ☒ Substantive comments have been received and are summarized in the attached.
- ☐ Conference with applicant is requested.
- ☐ The project is not consistent with the goals and objectives of the Department of Health and Rehabilitative Services. Approval is not recommended for reasons described in the attached.

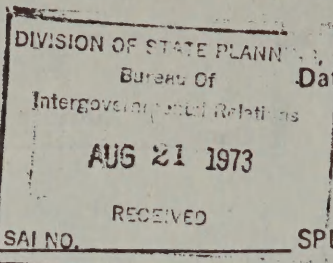
Attachment (s)



DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

Prior Notification and Review System

Emmett S. Roberts
Secretary

Date: July 30, 1973MEMORANDUM

REF. NO: DHRS

SAI NO.

SPDC (SAI)

74-0056-E

TITLE Draft E.I.S. Proposed 1973 Outer Continental Shelf Oil & Gas
General Lease Sale - Offshore Mississippi, Alabama, and Florida
APPLICANT U. S. Department of the Interior

TO: Robert H. Browning, Chief
Bureau of Comprehensive Rehabilitation Planning

FROM: Federal Programs Coordinator, Division of: Planning and Evaluation
The proposal identified above was reviewed by: Comprehensive Health Planning

J. Barry Mittan, Research AssistantJuly 31, 1973Reviewer's Name and Title L C

Date Reviewed

Reviewer's Comments: (Use additional sheet if needed)

Although this environmental impact statement identifies all of the lease areas as being at least moderately hazardous, if not highly hazardous, to the environment, our position (see attached memorandum) is that there will be no significant effect on the programs of this department. The possibility of minor oil spills is, according to the impact statement, nearly 100% and it is probable that a major spill will occur. This could have severe effects on the environment of Florida's Gulf coasts and a resulting economic loss of massive proportions, especially in the tourism and commercial fishing industries. It is recommended that the Department of Interior require strict safety precautions by the leases and that the facilities for cleanup of oil spillage be instantly available in case of a drilling accident or other spillage. Strict adherence to Florida's oil spill control law should be a major part of the state's position on this project.

STATE OF FLORIDA

DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

Prior Notification and Review System

Emmett S. Roberts
Secretary

Date: July 30, 1973

AUG 16 1973

C. C. R. P.

MEMORANDUM

REF. NO: DHRS _____ SPDC (SAI) 74-2056-E

TITLE Draft U.I.S. Proposed 1973 Outer Continental Shelf Oil & Gas
General Lease Sale - Offshore Mississippi, Alabama, and Florida
APPLICANT U. S. Department of the Interior

TO: Robert H. Browning, Chief
Bureau of Comprehensive Rehabilitation Planning

FROM: Federal Programs Coordinator, Division of: Health
The proposal identified above was reviewed by:

RECEIVED
STATE PLANNING
COORDINATOR
Intergovernmental Relations
AUG 21 1973
SAI NO. _____

Vernon E. Keys *(Signature)*
Reviewer's Name and Title

August 14, 1973
Date Reviewed

Reviewer's Comments: (Use additional sheet if needed)

Lessee must include in their agreements the following:

1. A comprehensive mechanism to prevent any primary or secondary adverse effect on the present water quality of estuaries and near offshore water areas.
2. Agree not to locate facilities (refineries, transfer areas, storage areas, etc.) near areas that are used for recreational or fishing purposes.
3. Positive measures to be taken to prevent oil spills either from the wells or transfer lines.

(6) Department of Legal Affairs, Office of the
Attorney General

This Department's comments consist of a memorandum from the Department of Pollution Control, Environmental Law Section, and notes reflecting part of the testimony presented by Mr. Oxner on behalf of the Florida Attorney General at the public hearing held in Tallahassee, on August 21-23, 1973.

Disposition

a. Memorandum from Environmental Law Section, Department of Pollution Control:

pg. 1, last para. - See Vol. 2, Sec. IV. A of the FES which discusses equipment inspections and see Vol. 5, Attachment K which presents the code book and inspection report forms used by GS inspectors for drilling and production operations on the OCS. For a description of economic impact of spills on sport and commercial fishing and tourism, see Vol. 2, Sec. III.H.2.

Pg. 2, para. 1 - See previous discussion concerning liabilities for oil spills presented in response to the Department of Administration's review comments. It is also pointed out that the Florida Oil Spill Prevention and Pollution Control Act, L. Fla. 1970, c. 70-244, prohibits the discharge of oil, petroleum products, their by-products, and other pollutants into the waters of the State. The State is authorized by the statute to license the operation of terminal facilities

and related appurtenances which are used or capable of being used for the purpose of drilling for, pumping, storing, handling, transferring, processing, or refining oil or other pollutants. These licenses shall include vessels used to transport oil or other pollutants between such facilities and other vessels within State waters. Any licensee and its agents or servants including vessels licensed under this statute who permits or suffers a prohibited discharge or other polluting condition to take place within State boundaries is liable to the State for all costs of cleanup and in addition is liable for other damages incurred by the State and for damages resulting from injury to others. The State need not plead nor prove negligence on the part of the licensee or operator of the vessel. In addition, large civil and criminal penalties are provided for violations of any of the provisions of the statute or any implementing rules or regulations. The owner or operator of a terminal facility or vessel licensed under the Act must provide evidence of financial responsibility. Such financial responsibility may be shown by evidence of insurance, surety bonds, qualification as a self-insurer, or other evidence satisfactory to the Department of Natural Resources. The Department of Natural Resources, having the responsibility for implementing the provisions of the statute, is authorized to adopt regulations on a variety of matters including (1) operating and inspection requirements for facilities, vessels and personnel, (2) procedures and methods for reporting discharges and other occurrences prohibited by the Act,

(3) procedures, methods, means, and equipment to be used for the removal of pollutants, and (4) requirements for minimal weather and sea conditions for permitting vessels to enter port and for the safety and operation of vessels, barges, tugs, motor vehicles, motorized equipment, and other equipment relating to the use and operation of terminals, facilities, and refineries.

The effect of the Florida Oil Spill Prevention and Pollution Control Act upon operations ensuing from this proposed lease sale would be felt by any onshore support facilities and vessels transporting oil falling within the licensing requirements of the statute. Onshore facilities and related appurtenances used for pumping, storing, handling, transferring, and processing of oil would be subject to the licensing requirements of the statute and discharges of pollutants from such facilities would subject the licensee to the strict liability standard of the statute. If any section in State territorial waters of a pipeline originating from platforms on the Outer Continental Shelf were construed to be an appurtenance of terminal facilities, discharges from such pipelines into State territorial waters would also fall under the coverage of this statute. The statute does not, however, require the licensing of operations on the Outer Continental Shelf nor would the liability imposed by the statute extend to oil spills originating on the Outer Continental Shelf.

Pg. 2, para. 2 - The concern expressed for the tourist industry and commercial fisheries of the Gulf coast in relation to potential effects from our proposed action has been given very careful consideration by the Department of Interior in preparation of both the DES and the FES. The Department of the Interior does not share the view that our proposed action "could ultimately destroy the tourist industry and commercial fisheries in the Gulf Coast area." We believe the analysis and information presented in the FES correctly evaluates the scope and intensity of the impacts concerning this matter.

Pg. 2, para. 3 - Additional alternatives have been included in the FES. See Vol. 3, Sec. VIII.

Pg. 2, para. 4 - The section on effects of onshore support facilities has been expanded. See Vol. 2, Sec. III. H. and our previous response to the Division of Technical Assistance.

Pg. 2, para. 6 - The long-term effects of minor spills are discussed in the FES (Vol. 2, Sec. III.A.2.c). Unfortunately, very little is known about effects resulting from chronic spillage. We sincerely hope our study plan (see Vol. 1, Sec. I.H.5) will eventually reveal information concerning low-level spillage effects.

The recovery potential of bays and estuaries, we believe, is relative in the sense that those bays and estuaries that are already stressed by high levels of pollution, if further subjected to a massive oil

spill, may take many many years to recover. Various officials from Florida have indicated that the Tampa Bay system, and Escambia and St. Joseph Bays are already stressed and a massive oil spill into any one of these bays could have a long-term effect.

A paper by Mark F. Godcharles (1971) has been reviewed and cited in the FES (Vol. 2, Sec. III.B.1) as it relates to the time sediments remain in suspension. Useful information concerning duration of sediment suspension is also contained in a paper by Brehmer (1965) and a recent report prepared by the Department of the Army, Lower Mississippi Valley Division, Corps of Engineers (1973). See especially Appendix F, Volume IV of V of the Corps of Engineers' report.

Pg. 2, last para - It would seem that the Florida Oil Spill liability law would make operators of barges, tankers and pipelines cautious about their actions.

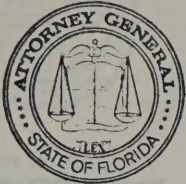
The Department of the Interior is responsible for the management, protection and preservation of national wildlife refuges. No action is proposed by this Department which it is felt will alter the natural state of any national wildlife refuge in the Gulf coast area.

Pg. 3, first para. - Potential economic effects are discussed in Vol. 2, Sec. III.H. The FES does not contain any discussion concerning the loss of protein that would result in rendering the "commercial fisheries...inoperative." We believe the analysis in this regard, as

presented in the FES, correctly evaluates the scope and intensity of potential impacts to commercial fisheries.

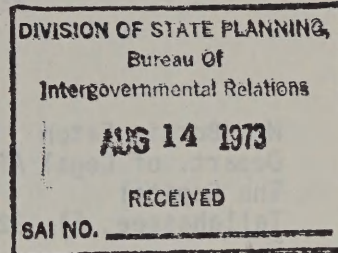
b. Notes representing part of the testimony given at the Tallahassee public hearing by Mr. Jerry Oxner on behalf of the Florida Attorney General.

The issues raised are addressed in our previous response to the Department of Administration's review comments, and in other appropriate sections of the FES.



ROBERT L. SHEVIN
ATTORNEY GENERAL

STATE OF FLORIDA
DEPARTMENT OF LEGAL AFFAIRS
OFFICE OF THE ATTORNEY GENERAL
THE CAPITOL
TALLAHASSEE, FLORIDA 32304



August 13, 1973

Mr. Edgar E. Maroney
Chief
Bureau of Intergovernmental Relations
Department of Administration
Division of State Planning
725 South Bronough
Tallahassee, Florida 32304

Re: 74-0056-E

Dear Mr. Maroney:

I had our attorneys review the above draft environmental impact statement. Attached is a copy of their findings.

If we may be of further assistance, please feel free to call upon us.

Sincerely,

James T. Flack
Executive Assistant

JTF/Rb

Enclosure: Memorandum regarding Offshore Oil Drilling EIS



STATE OF FLORIDA

Department of Administration

Division of State Planning

725 SOUTH BRONOUGH

TALLAHASSEE

32304

-2401

Reubin O'D. Askew
GOVERNOR

L. K. Ireland, Jr.
SECRETARY OF ADMINISTRATION

Earl M. Starnes
STATE PLANNING DIRECTOR

TO: Mr. Bernie Eaton
Depart. of Legal Affairs
The Capitol
Tallahassee, FL 32304

DATE: JUL 25 1973

DUE DATE: AUG 8 1973

FROM: Bureau of Intergovernmental Relations

SUBJECT: SAI: 74-0056-E

Please review and comment to us on the above draft environmental impact statement, copy attached. In reviewing the statement, you should consider possible effects that actions contemplated could have on matters of concern to your agency.

If you feel that a conference is needed for discussion of the project or resolution of conflicts, or if you have questions concerning the statement, please call Mr. Estus Whitfield at (904) 488-2401. Please check the appropriate box below, attach any comments on your agency's stationery and return to IGR or telephone "no adverse comments" by the above due date.

On that date, we intend to consider all review comments received and develop a state position on the project. In both telephone and written correspondence please refer to the above SAI number.

Sincerely,

Edgar S. Moroney
Chief
Bureau of Intergovernmental Relations

Enclosure

TO: Bureau of Intergovernmental Relations

74-0056-E

FROM:

SUBJECT: DEIS Review and Comments

☐ No Comments
☒ Comments Attached

Reviewing Agency:

Signature: *James T. Fitch*

Date: *8/13/73*

Title: *Executive Assistant*



STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

2562 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING, TALLAHASSEE, FLORIDA 32301

PETER P. BALJET
EXECUTIVE DIRECTOR

DAVID H. LEVIN
CHAIRMAN

M E M O R A N D U M

TO: Gayle Reddick
Division of Administration
Department of Legal Affairs

FROM: Barry Lessinger *BL*
Environmental Law Section

DATE: August 8, 1973

SUBJECT: Offshore Oil Drilling EIS

It is impossible to do an adequate review of an 800+ page EIS in a week, especially when it took the author two years.

I find the statement inadequate in many respects, and even accepting it on its face I find that there are many unanswered questions.

Initially, it seems highly questionable to permit a blanket statement for the entire sale when the areas in question pose different problems, to-wit:

In no area is the actual drilling supposed to have much adverse impact, but spills and on-shore facilities are a problem and differ with each area depending on wind and weather pattern, ocean currents, and present onshore topography and uses.

The effect of this EIS on this Department is far reaching:

The Constitutional provision relating to protection of natural resources places an affirmative burden on the Department of Legal Affairs to protect the environment of the State of Florida. If one were to accept the proposition that major spills are unlikely, the impact of minor spills on the delicate ecology of the Big Bend area is devastating.

No provision or mention is made in the EIS of inspections or other checks on the equipment which is designed to minimize

spills, nor is there an adequate description of the economic impact of a spill as it might affect the tourist industry or commercial and sport fisheries.

No coverage is given as to liability for spills, i.e. -- an independent drilling offshore, or a subsidiary of a major whose only asset is a leased drilling rig, has a major spill washing into the marshes and onto the beaches -- how does the State obtain restitution and/or damages? Initial transport is to be by barge, acknowledged by the EIS as the least safe method of transport.

On reading pages 69-70 of the EIS, one is struck by the bland assertions of environmental destruction which could ultimately destroy the tourist industry and commercial fisheries in the Gulf Coast area. On page 70 the EIS provides:

"The effect on air and water quality is unknown. The overall significance of these effects on a cumulative basis are unknown, but are considered adverse."

The above statement taken in conjunction with the fact that the estimated reserves of oil in these areas would supply approximately seven months of oil at present rates of consumption requires that other alternatives be more fully explored.

Pages 309, 310 and 311 discuss the requirements of onshore facilities and conclude on page 311:

"The environmental effects associated with onshore support facilities are unknown at this time because potential sources of pollution resulting from these activities are not well understood."

Recognition is given to the fact that state and local regulations govern placement of onshore facilities, but we do know that the support facilities at the Jay fields have resulted in increased air pollution in the area.

There is virtually little discussion of the long term effects of minor spills, the recovery potential of various ecosystems including estuaries, and the long time that fine sediments remain in suspension.

There is no discussion of the Florida Oil Spill liability law, nor its potential effect, nor the requirements for barges and tankers. There exist in the onshore areas National Wildlife Refuges, and little is made of the policy of keeping them in their natural state.

Gayle Redick
August 8, 1973
Page Three

In the economic studies little mention is made of the economic values which may be lost, nor is any coverage given to the impact of the loss of protein if the commercial fisheries are rendered inoperative.

Given the economy of Florida, the importance of the estuaries and marshes, the known damages, and the unknowns acknowledged in the statement, it is imperative that the State take action to prevent the sale until all questions are answered or, in the alternative, lease the areas for exploration purposes to determine if the oil is there at all and require separate impact statements for large areas prior to exploitation.

BL/lb

CC: Peter P. Baljet
James R. Brindell

~~THE UNAVOIDABLE IMPACT OF PIPES, BARGES AND TANKERS IS SHOWN,~~ AND YET, THE REPORT QUOTES THE PRESIDENT TO DEMONSTRATE THAT REGARDLESS OF ALL THE PROBLEMS, THE APPROVAL FOR OIL DRILLING IS A FOREGONE CONCLUSION.

THE REPORT, AT PAGE 6, STATES THAT "THE COASTAL ZONE OF THE GULF OF MEXICO IS RICHLY ENDOWED WITH ESTUARIES AND COASTAL MARSHES." THE REPORT CONTINUES, AT PAGE 8, TO EXPLAIN THAT THE COASTAL AREA OF THE GULF OF MEXICO REPRESENTS "ABOUT 45% OF THE TOTAL ÉSTUARINE AND COASTAL MARSH AREA IN THE CONTIGUOUS 48 STATES, ABOUT TWO-THIRDS OF THE COASTAL MARSHES AND ONE-THIRD OF THE ÉSTUARINE WATER AREA. IT IS THIS AREA OF SHALLOW ESTUARIES AND MARSHES THAT MAKES THE GULF OF MEXICO SO PRODUCTIVE OF FISH AND WILDLIFE RESOURCES." (EMPHASIS SUPPLIED.)

AT PAGE 13 THE REPORT STATES "THE GULF OF MEXICO IS ONE OF THE MOST PRODUCTIVE FISHING AREAS IN THE UNITED STATES, YIELDING 42.2% OF THE VOLUME AND 31.0% OF THE VALUE OF THE TOTAL UNITED STATES COMMERCIAL FISHERIES CATCH IN 1971." IT IS "SECOND ONLY TO THE PERUVIAN COAST IN TERMS OF PRODUCTION AND VALUE OF FISH."

AT PAGE 172 OF THE REPORT, IT IS POINTED OUT THAT "SALT WATER SPORT FISHING IS ONE OF THE MOST POPULAR OUTDOOR RECREATIONAL ACTIVITIES IN THE NORTHEASTERN GULF REGION, AND IS A SIGNIFICANT FACTOR IN THE ECONOMY OF THE COASTAL ZONE." (EMPHASIS SUPPLIED.)

IN 1971, SPORTFISHING ON FLORIDA'S GULF COAST CONTRIBUTED \$200 MILLION TO FLORIDA'S ECONOMY. THOUGH OFFSHORE GAS AND OIL PLATFORMS WILL ACT AS ARTIFICIAL REEFS CONTRIBUTING AFFIRMATIVELY TO THIS INDUSTRY, THESE LIMITED BENEFITS MUST BE WEIGHED AGAINST THE INESTIMABLE DAMAGE WHICH WILL BE CAUSED IN THE EVENT OF A MAJOR OIL SPILL AND THE UNKNOWN AND

CERTAINLY IRREPARABLE DAMAGE PERCIPITATED BY CONSTANT MINOR LEAKAGE AND SPILLAGE. ARTIFICIAL REEFS CAN AND ARE BEING CONSTRUCTED DAILY FROM OLD CAR BODIES, TIRES, AND OTHER RUBBLE WITHOUT THE ATTENDANT POTENTIAL FOR ENVIRONMENTAL DESTRUCTION. A MUCH MORE PALATABLE ALTERNATIVE TO OIL PLATFORMS EXISTS.

AS TO OTHER WILDLIFE, THE REPORT, AT PAGE 9, POINTS OUT THAT THE GULF COASTAL AREA OFFERS WINTERING AND NESTING AREAS FOR "A LARGE PROPORTION OF THE WATER FOWL POPULATION OF THE UNITED STATES."

DESPITE THE FACTS AS PRESENTED IN THE REPORT THAT THE HIGH ENERGY SYSTEM OF THE GULF OF MEXICO SUPPORTS A HUGE PERCENTAGE OF THE FOOD SUPPLY OF THE UNITED STATES, THE DRAFT STATEMENT TOTALLY AVOIDS ANY DISCUSSION OF THE MONETARY VALUE OF THAT HIGH ENERGY SYSTEM, EVEN AS IT IS NOW OPERATING. WHETHER THIS SYSTEM WILL BE DISRUPTED BY OIL AND GAS OPERATIONS IS IGNORED. THE DRAFT DOES NOT AT ANY POINT CONSIDER THE DOLLAR VALUE OF THAT PART OF THE EXISTING ENERGY SYSTEM WHICH WILL BE DAMAGED OR DESTROYED TO PROVIDE ENERGY CREATED BY THE BURNING OF OIL. THE REPORT POINTS OUT THAT MARSHES AND ESTUARIES ^{ARE} ~~AND~~ VALUABLE AS RESOURCES, BUT NEVER REALLY ACCOUNTS FOR THEIR ACTUAL VALUE IN THE TOTAL ENERGY SYSTEM, OR, FOR THAT MATTER, IN OUR LIFE CHAIN ITSELF!

AT PAGE 356 OF THE DRAFT STATEMENT, IT IS POINTED OUT THAT IN 1970, NINE COMPANIES WERE FINED \$2,353,000 FOR FAILURE TO INSTALL SUBSURFACE SAFETY DEVICES. THE FINES WERE ^{assessed at the rate of} \$2,000 PER COUNT. THIS MEANS THAT IN 1970, THERE WERE 1,179 VIOLATIONS FOR FAILURE TO INSTALL SUBSURFACE SAFETY DEVICES. ADDITIONALLY, IS IT SUGGESTED THESE FINES ARE HARDLY AN ADEQUATE DETERENT IN LIGHT OF THE FACT THOSE FINED (INCLUDING CHEVRON, HUMBLE, GULF, MOBIL, CONTINENTAL, SHELL, AND

UNION OF CALIFORNIA) ARE AMONG THE 15 RICHEST CORPORATIONS IN THIS COUNTRY WITH TOTAL ASSETS COUNTED IN BILLIONS OF DOLLARS. (EXXON'S ASSETS, FOR EXAMPLE, ARE LISTED AT \$22 BILLION. EXXON IS THE SUCCESSOR CORPORATION OF HUMBLE WHOSE FINES WERE \$300,000 REPRESENTING 150 VIOLATIONS IN 1970.

FURTHER, THE REPORT GIVES LITTLE HOPE OF PROPER CONTROL OF OFFSHORE OIL DRILLING FOR THE FUTURE, ANY MORE THAN WAS AVAILABLE IN 1970 WHEN OVER ONE THOUSAND VIOLATIONS OF SAFETY STANDARDS WERE DETECTED. AT PAGE 346, IT IS POINTED OUT THAT THE OPERATOR IS REQUIRED TO MAKE INSPECTIONS AND REPORTS. THAT IS NOT VERY REASSURING IN LIGHT OF PAST PERFORMANCE. AT PAGE 352, IT IS NOTED THAT THE GEOLOGICAL SURVEY INSPECTORS HAVE BEEN INCREASED, BUT NOWHERE IS IT INDICATED THAT THE NUMBER OF INSPECTORS ARE NOW SUFFICIENT TO POLICE OPERATIONS. THERE ARE 287 MAJOR PRODUCING PLATFORMS ALREADY IN SERVICE. NEARLY A MILLION ACRES OF ADDITIONAL SUBMERGED LANDS ARE HERE PROPOSED FOR LEASING ACTION.

WE DON'T HAVE TO GUESS AT WHAT TO EXPECT. PAST PERFORMANCE CLEARLY INDICATES THE MULTI-MILLION DOLLAR CORPORATE ^{CORPORATE} GRANTS PREFER TO HANDLE ^{DURING} UNSAFELY AND PAY A SMALL FINE OF \$2,000 PER VIOLATION. CERTAINLY, IF THE COMPANIES IN 1970 WERE WILLING TO PAY \$2,358,000 IN PENALTIES AND, PARENTHETICALLY, INCREASE THEIR AVERAGE CORPORATE NET PROFITS, ~~WITHOUT-CONTEST~~, THE SYSTEM DOES NOT PROTECT THE INTERESTS OF THE PEOPLE OF FLORIDA. AT PAGE 354 OF THE REPORT IT IS POINTED OUT THAT SECTION 5(B)(1) AND (2) OF THE OUTER CONTINENTAL SHELF LANDS ACT, PROVIDES FOR CANCELLATION OF LEASES. THERE IS NO DISCUSSION OF WHAT THE EFFECT OF THAT PROVISION HAS BEEN IN THE PAST, AND INDICATES NO HELP IN CANCELLATION OF LEASES FROM NEGLIGENT COMPANIES. NOT ONE SINGLE CANCELLATION

IS CITED. ^{Due} CAN ONLY ASSUME NO LEASE WAS CANCELLED. INSTEAD, IT APPEARS, \$2,000 FINES ARE COLLECTED.

AT PAGE 376 OF THE STATEMENT, IT IS POINTED OUT THAT STIPULATIONS CAN BE PLACED IN LEASES FOR THE PROTECTION OF THE PUBLIC INTERESTS. THERE IS NO INDICATION IN THIS DISCUSSION THAT THE STIPULATIONS PLANNED BY THE BUREAU OF LAND MANAGEMENT WILL BE ADEQUATE TO PROTECT THE INTERESTS OF FLORIDA. THE ATTORNEY GENERAL URGES TOUGH STIPULATIONS SHOULD BE MANDATORY, REQUIRING CANCELLATION OF A LEASE FOR OIL SPILLS OR BLOW-OUTS, AND ABSOLUTE LIABILITY FOR DAMAGE TO THE PRODUCTIVITY OF THE GULF OF MEXICO AND THE RECREATIONAL AND COMMERCIAL INTERESTS OF THE COASTLINE. WITHOUT THESE TOUGH LEASE STIPULATIONS, WE WILL BE FACED WITH ANOTHER SANTA BARBARA INCIDENT, IN WHICH THERE, THE CORPORATIONS, WHEN STOPPED FROM OIL DRILLING, DEMANDED REIMBURSEMENT FROM TAX DOLLARS FOR THE AMOUNT OF MONEY THEY "MIGHT" HAVE MADE HAD THEY BEEN ALLOWED TO CONTINUE THEIR OPERATIONS.

FOR THE ABOVE REASONS, THEREFORE, THE ATTORNEY GENERAL OF FLORIDA RECOMMENDS THAT THE DEPARTMENT OF THE INTERIOR SHOULD NOT AUTHORIZE THE LEASE SALE OF THESE SUBMERGED LANDS FOR OIL DRILLING. AT THE VERY LEAST, THE SALE SHOULD BE DELAYED UNTIL FURTHER INFORMATION CAN BE DEVELOPED. HOWEVER, IT STRONGLY APPEARS FROM THE TONE OF THE REPORT AND FROM PUBLIC STATEMENTS BY BUREAU OF LAND MANAGEMENT PERSONNEL THAT APPROVAL OF THE PROPOSED LEASE SALE IS A FOREGONE CONCLUSION. SURELY, THESE HEARINGS AND THE INFORMATION DEVELOPED WILL BE CONSIDERED IN GOOD FAITH. IF THE SALES DO TAKE PLACE, DESPITE THE WARNINGS, THE ATTORNEY GENERAL RECOMMENDS THAT THE BUREAU OF LAND MANAGEMENT DEFINITELY DELETE THE HIGH RISK TRACTS AS SUGGESTED AT PAGE 406 OF THE REPORT. HE ALSO RECOMMENDS THAT ENVIRONMENTAL IMPACT STATEMENTS BE PREPARED FOR EACH TRACT LEASED. ADEQUATE ENVIRONMENTAL ASSESSMENTS CAN ONLY BE MADE WHEN EXACT LOCATIONS OF DRILLING OPERATIONS ARE DETERMINED. CERTAINLY, FURTHER HEARINGS AS SUGGESTED IN THE PRELIMINARY MEETINGS IN ST. PETERS-

BURG BEACH AND PANAMA CITY ARE INDICATED.

THE ATTORNEY GENERAL ALSO RECOMMENDS STRICT LEASE STIPULATIONS CALLING FOR MANDATORY CANCELLATION OF THE LEASE FOR ANY OIL SPILL OR BLOW-OUT, AND ABSOLUTE LIABILITY FOR ANY DAMAGE CAUSED.

FINALLY, THE ATTORNEY GENERAL NOTES WITH GREAT CONCERN WHAT IS CALLED, AT PAGE 306 OF THE REPORT, "INDUCED INDUSTRIALIZATION IN THE COASTAL ZONE AS BEING AMONG THE SECONDARY IMPACTS TO BE EXPECTED. THE DEVELOPMENT OF ONSHORE PIPELINES, REFINERIES, AND OTHER FACILITIES, WITH THE RESULTANT POLLUTANTS AND SHORELINE DESTRUCTION, WILL BE AN EVEN GREATER ENVIRONMENTAL HAZARD THAN THE OFFSHORE OIL DRILLING. BUT THESE, AS SO MANY IMPORTANT ISSUES, ARE NOT GIVEN THEIR DAY IN THE REPORT. BEFORE ANY OFFSHORE OIL DRILLING IS APPROVED, TOUGH RESTRICTIONS MUST BE PLACED UPON ONSHORE DEVELOPMENT.

The first thing I noticed when I stepped
out of the car was the cold air. It was
a sharp contrast to the warm blanket of
the car. I shivered slightly, but then I
remembered that this was the first time
I was going to see the doctor. I took a
deep breath and walked towards the building.
The doctor's office was on the second floor.
I took the stairs and found the door open.
I walked in and saw the doctor sitting at
his desk. He looked up at me and smiled.
"Hello," he said. "What's the matter?"
I told him about the pain in my back.
He listened carefully and then he said,
"Let me look at you." He stood up and
walked towards me. He put his hands on
my shoulders and felt my back. He then
said, "It looks like you have a hernia.
You need to see a specialist." I felt
a little nervous, but the doctor reassured
me. He said, "Don't worry, it's not
serious. Just see a specialist and they
will take care of it." I thanked him and
left the office. I felt a little better, but
the pain was still there. I decided to
see a specialist. I found one and made
an appointment. I was nervous, but I
knew I had to do it. I went to the
specialist's office and he examined me.
He said, "Yes, you do have a hernia.
But don't worry, it's not serious. I
will operate on you and everything will
be fine." I felt relieved. I knew I was
in good hands. The operation was a success.
I was home in a few days and the pain
was gone. I was happy and grateful.
I had found the right doctor and the
right specialist. I was back to normal.
I was happy and grateful.

(7) Department of Pollution Control

This Department requests that the sale be delayed until the issues identified in its review comments have been "satisfactorily addressed in a revised draft impact statement."

Disposition

Pg. 1, item I. - Vol. 1, Sec. I, H. 2., of the FES presents the steps the Department is taking in response to the NASA study as well as other reports recently completed that are critical of OCS operating practices and technologies. Also see Vol. 5, Attachment D which contains the results of a work group formed by the GS to recommend remedial measures to be taken in response to the NAE and NASA reports. Also see the entire Section I. H. of Volume 1 for numerous studies applicable to plans for this proposed sale.

We would also point out that the results of studies, when appropriate, can be used to the extent necessary to revise OCS operating orders and regulations. See Vol. 3, Sec. VIII. C. 4.

Pp. 1-2, item I. a - Very little information is available concerning chronic oil spills. In response to the need for data concerning the effects of oil spills on biota, the BLM is developing contingency plans for FY '74 involving both inhouse and contract efforts to analyze effects of a major oil spill. In addition, the study plan outline presented in Vol. 1, Sec. I. H. 5. of the FES includes selection of representative flora and fauna and performance of toxicity and sublethal evaluations using crude oil produced in the

offshore Gulf area. It will be several years before the results of these and other studies are known. Consideration has been given in the alternatives section of the FES to the idea of delaying the proposed sale until the results of these studies are available. (See Vol. 3, Sec, VIII. C. 2.)

Pp. 3-6 - Very little additional information is available concerning the 20 items listed on these pages. Items #5 and #20 will be affected by our proposed pipeline corridor stipulation (Vol. 2, Sec. IV. C.) and the studies described in Vol. 2, Sec, IV. C. and Vol. 1, Sec. I. H. 5.

Item #6 changes because the Geological Survey explains that barium in drilling muds is removed by centrifugation prior to disposal. See Vol. 1, Sec. I. F. 3. b.

Item #12 would not apply to any proposed lease blocks offshore Florida because common carrier pipelines resulting from these areas will not result beyond the 200 foot contour and therefore will be buried.

Pp. 6-10 - The 17 items presented on these pages remain essentially unchanged except for the following:

Item #10 - The predicted amount of spillage estimated to result from barging has changed. See Vol. 2, Sec. III.A.2.b. and our proposed stipulation restricting barging (Vol. 2, Sec. IV.D.1.).

Item #11 - A considerable effort has been made in the FES to predict both intentional and accidental discharges of all types that could potentially result from this sale. See Vol. 2, Sec. III. A. 4.

Item #16 - Any H_2S produced will be converted to sulfur dioxide before venting or if quantities are great enough the Claus process can be used to convert hydrogen sulfide to elemental sulfur. Technology is available and any ambient air sulfur dioxide concentrations will have to be within appropriate State and Federal limits.

Item #17 - The information concerning quantities of drilling muds predicted to be disposed of offshore is in error. See Vol. 2, Sec. III. A. 1. a. for refined estimates.

Pp. 10-11, Item IV - The FES contains an expanded discussion of energy alternatives. See Vol. 3, Sec. VIII. See especially Sec. VIII. B. 8. for additional alternatives considered. Energy from Gulf Stream thermal gradients is discussed as an indirect solar energy source (Sec. VIII. B. 8. a. 5.). Storage of oil, energy conservation and imported LNG all are discussed in Vol. 3, Sec. VIII. B.

Pg. 11, Item V - See Vol. 2, Sec. IV. D. 1. for a proposed stipulation restricting barging and Vol. 2, Sec. IV. C. for a pipeline stipulation and study and Vol. 1, Sec. I. H. 5. for an extensive study that would include examination of sediments to be disrupted during pipeline installation.

Twelve of the tracts identified as highly hazardous in the DES that were located in the Pensacola South area have been deleted from this sale due to potential conflict with defense testing and training activities. We have considered the alternative of deleting the Pensacola tracts as well as other areas from inclusion in this proposed sale. (Vol. 3, Sec, VIII. A. 2.). We have also presented the alternative of deleting high risk tracts. The Department of Defense was asked to provide us with a hazard analysis concerning the tracts located in the vicinity of the Destin anticline in the Pensacola South area. This information has not been received. For a discussion of this see Vol. 2, Sec. III. F. and K.

Pg. 12, last para. - Clarification has been supplied in the FES.



STATE OF FLORIDA
DEPARTMENT OF POLLUTION CONTROL

2552 EXECUTIVE CENTER CIRCLE, EAST
MONTGOMERY BUILDING, TALLAHASSEE, FLORIDA 32301

DIVISION OF STATE PLANNING
Bureau Of
Intergovernmental Relations

AUG 16 1973

RECEIVED
SAI NO. 74-0056-E

PETER P. BALJET
EXECUTIVE DIRECTOR

August 15, 1973

DAVID H. LEVIN
CHAIRMAN

Mr. E. E. Maroney, Chief
Bureau of Intergovernmental
Relations
725 South Bronough Street
Tallahassee, Florida 32304

US Department of Interior
DEIS Proposed 1973 Outer
Continental Shelf, Oil &
Gas General Lease Sale
Offshore Miss., Ala., & Fla.
SAI 74-0056-E

Dear Mr. Maroney:

The above referenced project has now been reviewed. In view of the considerations discussed below, our Department requests that the proposed lease sale be delayed until the following concerns are satisfactorily addressed in a revised draft impact statement:

I. Our Department feels that sale of the lease should await the development of more advanced quality control, safety and pollution control equipment and procedures. At a minimum, the procedures recommended by the National Aeronautics and Space Administration (NASA) in their report entitled "Applicability of NASA Contract Quality Management and Failure Mode Effect Analysis Procedures to the USGS Outer Continental Shelf Oil and Gas Lease Management Program" (Nov., 1971) should be adopted. We note the comment on Page 3 of the NASA report that "In summary, the lack of identifiable quality control organizational elements, primary reliance on inspection and wide-spread objection to written procedures or record-keeping indicates a significant lag in quality control and reliability technology in OCS operations. The need for improved equipment and methods for off-shore operations is recognized; however, the need for and use of quality and reliability techniques as aids to effecting this needed improvement is not yet generally appreciated by industry."

In addition, it is felt that the results of the numerous studies referred to on Pages 344, 345, 355, 357 and 378 of the DEIS should be included in the plans for the development of this lease due to the possibility of irreparable damage to Florida's ecosystem and economy.

II. Our Department further feels that the Draft Environmental Statement presently includes far too many unknowns to allow a rational judgement of the merits of the proposed action.

a. The most serious deficiency is the lack of information on the effects of chronic low-level oil spills. As indicated in the draft statement: P.396 - "Concern has been expressed regarding the possibility of long-term reduction in productivity of the overall ecosystem resulting from continued oil and toxic chemicals being spilled into the water. The possibility that the

implementation of the proposed lease sale together with existing production on the Outer Continental Shelf might sacrifice the long-term productivity of the area to the short-term use of mineral resources might be recognized even though the long-term effects of oil spillage into the environment are not clearly understood at this time. The additional stress which the ecosystem can absorb is limited, but at present, the bounds of these limitations are not known. St. Amant observes, 'Certainly the significance of the continual addition to and accumulative effect of sublethal pollutants in the environment is probably the most important ecological question facing us today.' ^{1/} and P. 400 - "An irreversible or irretrievable commitment of fish and wildlife resources and their habitats could occur in the areas of a massive oil spill or if frequently subjected to chronic low levels of oil pollution. At this time, there is insufficient evidence to conclude that low level spillage has led to an irreversible commitment of fish and wildlife resources but there is enough evidence to indicate that this is a possibility that deserves close attention, and constant study."

Although we are unable to find mention of this item in the draft impact statement, we note that the Department of the Interior was previously concerned enough about the general lack of concrete evidence on this subject to establish a special research program to evaluate, on a continuing basis, the effects of oil spills on marine biota. As indicated on P. 244 of the DEIS of the "Proposed 1973 Outer Continental Shelf East Texas General Oil and Gas Lease Sale, "This project will consist of a team of 15 people to be comprised of marine biologists, oceanographers, pipeline engineers and support personnel working out of New Orleans. They will initiate studies and compile data concerning the short- and long-term impact of oil spills on marine biota as well as the environmental effects of pipeline construction resulting from offshore operations. Although this project was put into full operation in the fall of 1972, it will be some time before initial study results and data will become available for dissemination. This project will also be available for possible expansion of its activities into new areas where offshore leasing may be proposed." We commend the Department of the Interior on this initiative and believe that the proposed lease sale should be delayed until the results of these studies allow a more realistic appraisal of possible environmental effects.

^{1/} St. Amant, Lyle S., "Biological Effects of Petroleum Exploration and Production in Coastal Louisiana", Louisiana Wildlife and Fisheries Commission, December 1970, Page 20.

In addition to the lack of knowledge on the possible long-term effects of the productivity of Florida's ecosystem, our Department has identified more than twenty other areas in which adequate information to rationally judge the impact of the proposed action is lacking:

1. P. 233 - "Unfortunately, all spills are accidents, and the volumes resulting cannot be predetermined reliably nor can any trends be identified by looking at past data concerning volume or number of incidents."
2. P. 257 - The effects of small amounts of oil on fish behavior and migration patterns is apparently unknown.
3. P. 258 - The impact on the nekton (i.e., free-swimming fish and mammals, e.g., Manatees) cannot be predicted at this time.
4. P. 261 - The anticipated impact on birds is not great but the barging of oil unfortunately presents "an unknown risk factor".
5. P. 264 - "Exact routing of pipelines, which would require dredging, have not yet been determined, but have tentatively been planned for (1) somewhere off the Chandeleur Islands and through Mississippi Sound, (2) somewhere just east or west of Pensacola Bay (and hence through Big Lagoon or Santa Rosa Sound) or through St. Joseph Bay to Port St. Joe, and (3) into the Tampa Bay system. Resuspension of toxic materials could occur in Mississippi Sound due to industrial pollution of the Pearl River or in Pensacola Bay but cannot be predicted at this time."
- P. 273 - "The possibility of impact by resuspended toxic heavy metals and persistent pesticides exists, but the potential for the occurrence, location, scope and duration of the impact are unknown."
6. P. 271 - "The barium in drilling muds presents a serious, but as yet undetermined, threat to aquatic life, because it is known from upland operations that barium compounds have a severe, almost sterilizing effect on plant and animal life of the soil. ^{1/} Investigating on behalf of the Gulf Universities Research Consortium Offshore Ecology Investigations, Dr. James I. Jones (pers. comm.) has found barium compounds at 8-10 orders of magnitude above "normal" background levels in sediments of Grand Isle, Louisiana, where drilling has gone on for many years. The study is incomplete at this time, but the reason for concern is

^{1/} Environmental Protection Agency: "Economic and Social Importance of Estuaries". Estuarine Pollution Study Series No. 2. E.P.A. Water Quality Office.

evident. We will await the outcome of these studies before attempting to assess the impact of drilling muds."

7. P. 275 - The potential risk of beach erosion by wind when ground cover is removed for the installation of pipelines is presently unknown.

8. P. 276 - "No information has been found concerning the effects of oil in the Gulf states wetlands."

9. P. 282 - "A small amount of spilled oil is floating somewhere on the waters of the northwestern Gulf almost continually. Concern has been expressed 1/ that the evaporation of this spilled oil may be the cause of the substantial levels of hydrocarbons which have been detected in the sea breeze coming off the Gulf. Preliminary surveys 2/ indicate that the content of reactive (smog-producing) hydrocarbons in the sea breeze between Corpus Christi and Port Arthur are at a level three times higher than the national average. At the present time there is no hard evidence as to the source of these materials. At this time we are unable to predict the degree of deterioration in air quality that will occur because of this proposed sale."

10. P. 255 - The amount of iron to be discharged from tracts proposed for leasing (and therefore the possibility of triggering a red tide) is unknown.

11. P. 284 - "Unfortunately, no estimate of the amount of formation water to be discharged as a result of this sale can be made at this time." These brines will evidently contain high concentrations of mineral salts, entrained oil averaging less than 50 ppm, and are completely devoid of dissolved oxygen.

12. P. 288 - "It has also been reported 3/ that unburied pipelines (beyond the 200 foot depth contour) pose a serious problem to the shrimp trawling operations. It can be concluded that a significant amount of shrimp trawlings does occur in water depths where pipelines would probably remain unburied. We have no information concerning the frequency, location, or severity of incidents involving trawling operations and unburied pipelines and therefore cannot assess the scope of the impact, should this proposed sale be held."

1/ Personal communication with Mr. Kenneth Ports. Texas Air Pollution Control Service.

2/ Ibid.

3/ Testimony of James C. Farrelly, President, Louisiana Shrimp Assoc., presented at August 23, 1972. OCS Public Hearing, New Orleans, Louisiana.

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13. P. 291 - "Floating trash accidentally lost off platforms also constitutes a hazard to boats. Damaging collisions can result between small fast boats and floating drums, cans, and wood. The screws of all sizes of motor boats and vessels can be fouled on floating plastic sheeting and plastic or nylon ropes. The extent of this problem is unknown."

14. P. 296 - "Since Air Force procedures provide for dropping ordnance over water in the event of an emergency which precludes the use of a designated salvo area, potential hazards, however remote, exist in every tract within the defense warning area W-151. Such emergencies have occurred in the past, and ordinances have been jettisoned as far shoreward as Choctawhatchee Bay. No quantification as to the amount of ordnance located in and outside the salvo areas was available."

15. P. 303 - Items of historical or archeological interest - "The potential for loss or damage is clear, but at this time, we cannot assess the scope of the impact that will result if this proposed sale is held."

16. P. 309 - "The impact on air and water quality resulting from production terminals and transfer facilities is unknown at this time. However, if produced waste water is disposed of onshore then this would be expected to result in the single most adverse environmental effect associated with onshore terminals."

17. P. 311 - "The environmental effects associated with onshore support facilities are unknown at this time because potential sources of pollution resulting from these activities are not well understood. Moreover, this issue is complicated by the fact that exact locations and land and water requirements can not be determined reliably this far in advance of the need for such facilities."

18. P. 322 - "A vector analysis consisting of nearshore current direction and velocity, and wind direction and velocity data in the study area would be necessary to construct an oil spill simulation model. Unfortunately, reliable and extensive nearshore surface current data are not available for the study area."

19. P. 357 - "No data for direct comparison of pollution incidents for similar time periods before and after the current "more stringent enforcement policy" are available."

20. P. 369 - "Data concerning the miles and sizes of pipes needed, proposed routes, amount of dredging anticipated, cannot be determined until such time as the exact locations of production have been delineated."

21. P. 394 - "Spilled oil and debris floating in the water or washed up on the beach would also severely detract from the scenic values of any local area. Considerable uncertainty attaches to this possible effect."

III. While the lack of information on the environmental impact of the proposed lease sale makes a realistic appraisal of the associated risk almost impossible, our Department feels that the following known information indicates that the proposed sale would be detrimental to Florida's economy and environment:

1. P. 316 - "In summary, the proposed sale, when viewed either in isolation or in synergism with related developments is expected to have minimum socio-economic impact. This is true on a Gulf wide basis because a total refinery capacity has been derived independent of this sale's possible contribution. It is also true on a regional basis, because (1) the utilization of an existing infrastructure for the most part will bring no new types of activity, and therefore, no significant socio-economic impact to those areas not presently experiencing such activity, and (2) because there will be very little, if any incremental increase, the order of magnitude for those areas already experiencing such activities will remain essentially unchanged."

However, the proposed lease sale would probably have a detrimental effect on the economy of Florida's Gulf Coast since, as shown in the following statistics, approximately one half of the area's economy is based on tourism and sport and commercial fisheries:

P. 178 - Manufacturing (value added)	550 million
Tourism	500
P. 172 - Sport Fishing	200
Construction	100
Agriculture	130
Phosphate Mining (value at mines)	125
P. 182 - Commercial Fishing	30
	<hr/>
TOTAL	1,535

The total from tourism, sport and commercial fishing is \approx 730 million or approximately one half of the economy of the area.

2. P. 196 - "The coastal zone of the northeastern Gulf has considerable potential for aquaculture. There are at present a number of experimental and commercial attempts at aquaculture being made. The focus of most of these ventures is on the production of high yield, high priced species, such as shrimp, oysters, stone crabs, spiny lobsters, and pompano. To date, shrimp farming appears to be the most commercially successful. Marifarms Incorporated of Panama City, Florida, is the largest commercial shrimp farming enterprise in the world. Its project involves 2,500 acres and plants which cultivate, harvest and process the shrimp. Production in 1971 amounted to 500,000 pounds, mostly white shrimp (Taylor, J. L., et. al., 1973).

Some of the other aquaculture projects (experimental or commercial) on the Gulf coast are located at Cedar Key (oysters), Key West (bait shrimp), Big Cypress Swamp (shrimp), Tampa Bay (oysters), lower Mobile Bay (pompano), and Crystal Bay, Florida (shrimp)."

3. We note that recent increases in the price of beef, pork and chicken will in all likelihood increase the demand for seafood from both commercial fisheries and aquaculture operations.

4. P. 251 - "It is our conclusion, based on past performances (see statistics, section III. A. 2. b-d.) that sooner or later a major spill will result if this proposal is implemented. We are certain that thousands of minor spills will occur."

5. P. 251 - "As to the effects of a major spill on plankton, and the entire ecosystem as well, we endorse the conclusions of Dr. James I. Jones, Research Coordinator of the Coastal Coordinating Council, Florida Department of Natural Resources 1/. He stated that: "The catastrophic major oil spill is the single most visible, and therefore to a degree, most controversial of any aspect of petroleum production and transfer. While there is no question that a major spill does indeed cause a massive destruction to both flora and fauna, as well as the environment itself, these effects are of a temporary nature in most respects. The natural recovery capability of a healthy ecosystem is such that the massive mortality and destruction attendant with a major spill will allow a recovery of the ecosystem, with some alteration, within a relatively few years. In those areas where the ecosystem is already stressed, however, as is the case in many areas within the coastal zone, a single catastrophic spill could well create effects that are far beyond the natural recuperative powers of the ecosystem."

6. P. 252 - "The greatest possibility for a coastal oiling is from tracts in the Pensacola South No. 1 area. Here the eastward-flowing current, in conjunction with surface wind-driven and tidal currents has the potential to deposit major oil spills ashore and in estuaries in an area between Pensacola and Cape San Blas.

7. P. 253 - "It is predicted that oil will be shipped by tanker from Tampa Bay and St. Joseph Bay within two to five years of leasing. This means that there will undoubtedly be frequent minor spills from bunkering operations in these areas; there is also the more remote possibility of a major tanker accident. It is known that the ecosystems in these estuaries are already stressed (section II. G.) from sewage and industrial pollution. If, as a result of this proposed sale, tankering of oil is used, we predict an incremental increase in the degradation of these estuaries."

8. P. 253 - The regular discharge of formation waters, "oil field brines", could have a severe local impact on the plankton. It has been conjectured that the brines also could serve as a "fertilizer" in shallow seas and might trigger a red tide.

9. P. 393 - "Oiled beaches may require days, weeks, or years for adequate restorations if they become damaged. The uncertainty of accidental spills is applicable to this event also, but if spilled oil ever reached the beach it would have an adverse effect on recreational opportunities."

P. 389 - "If mechanical means are employed in beach clean-up operations (bulldozers, front-end loaders and other earth moving equipment) as was done following the Santa Barbara and Arrow oil spill incidents, then shoreline equilibrium may be upset by beach removal. Excessive removal of beach materials can lead to erosional problems unless enough sand and gravel, for example, are available to replace the removed beach materials."

10. P. 230 - "Using the range of production figures of 360,000—590,000 bbl. daily it is calculated that between 54 bbl. and 88.5 bbl. may be spilled daily (19,700—32,300 yearly) as a result of barge traffic accidents."

11. P. 233 - "All spills are accidents and the volumes resulting cannot be predetermined reliably nor can any trends be identified." However, if the recorded spills from 1964 through 1972 are used as an estimate of the probable oil spills from the drilling operations, then 0.011% of the proposed oil production or "14,500 to 23,500 bbl./year of oil produced from tracts included in the proposed lease sale could be spilled."

12. P. 277 - Effect of oil on marshes - "We believe the impact, if oil did reach the marshes, would be moderate to severe; the severity and duration, of course, depends mainly on the amount of oil reaching the marshes."

13. P. 269 - The environmental impact of a major spill on benthic communities (e.g., oysters) of the shallower continental shelf would be substantial. "It is especially significant that contaminated shellfish elicited no oily taste when eaten---which sheds considerable doubt on the practice of determining pollution

levels by taste tests, as is common in many areas."

14. P. 289 - "Fish which are either externally coated or internally contaminated with oil are unmarketable. It has been shown that fish that live in the vicinity of chronic spillage are likely to be internally contaminated."

15. P. 291 - "In seas adjacent to the United States, including the Gulf of Mexico, safety fairways have been established for the safe passage of vessels enroute to, or from, U.S. ports. However, an unknown number of ships do not use these fairways, greatly increasing the possibility for a collision with drilling rigs, permanent platforms, and their attendant vessels. Impacts which could result include loss of human life, spill of oil, release of debris including parts of, or the entire drilling rigs, and the ship, if it sinks. The contents of the ship's cargo could pose a serious threat to the environment if it includes toxic materials such as chemicals, crude oil, or refinery products."

(P.302) 16. P. 307 - Approximately 400 to 800 acres of land will be used for the construction of terminal and transfer facilities. Although "The impact on air and water quality resulting from production terminals and transfer facilities is unknown at this time", it is expected that these facilities will have an impact upon water quality (particularly if waste water is disposed of on-shore), aesthetic and scenic values, noise levels, and air quality. The impact on air quality would be expected to be more severe for production from the Pensacola South, Appalachicola South, Tarpon Springs and Tampa lease sale areas.

(P.85) since "hydrogen sulfide (H_2S), a highly corrosive and noxious gas, is produced from many Turrasic wells."

17. Although the environmental effects of the barium in drilling muds are presently unknown (P. 271), it is anticipated that approximately 1,500 bbl. of drilling mud (corresponding to $\approx 319,200$ pounds or approximately 159.5 tons of Barium Sulfate will be released for each well drilled (pp.42-45). Since approximately 925--1,490 wells are expected from this lease sale (P.7), approximately 295,075,000--475,310,000 pounds or 147,538--237,655 tons of Barium Sulfate are expected to be released to the environment from this lease sale. The following table (composed from P.44 of the DEIS) shows the estimated discharge of several of the constituents from one of the muds proposed for use in the proposed lease operation:

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MUD COMPONENT	PER EACH WELL		FOR ESTIMATED 925—1,490 WELLS OF LEASE SALE	
	Weight in Lbs.	Weight in Tons	Weight in Lbs.	Weight in Tons
1. Barium Sulfate	319,000	159.5	295,075,000— 475,310,000	147,538— 237,655
2. Caustic (Sodium Hydroxide)	22,500	11.25	20,812,500— 33,525,000	10,406— 16,763
3. Ferrochrome Lignosulfonate (Iron - 2.6%, Chromium - 3.0%, Sulfur - 5.5%)	29,600	14.8	27,380,000— 44,104,000	13,690— 22,052
4. Lime (hydrated lime)	23,000	11.5	21,275,000— 34,270,000	10,638— 17,135

IV. Discussion of alternatives - The discussion in the draft impact statement, by their own admission (P.642), is highly subjective and includes a large measure of judgement. In our opinion, more consideration should be paid to alternative methods of providing the energy expected from the proposed lease sale.

For example, it is felt that more attention should be given to energy conservation, the storage of oil in unused salt domes, the increased importation of liquid natural gas (LNG), and energy generation from ocean temperature gradients.

The storage of oil in unused salt domes (P.601) would allow the accumulation of reserves of imported oil that would not be susceptible to foreign political pressures while the increased importation of LNG would apparently fulfill short-term energy needs.

As noted by Berg ^{1/}, "the ineffective utilization of energy in building and industrial processes constitutes a major component of the energy problems in the United States. Not only could the effectiveness of energy utilization be improved, but such improvement appears to be justifiable economically, especially when the costs of the alternative of expanding the national capacity to supply increasing energy demands are considered."

^{1/} Berg, Charles A., "Energy Conservation Through Effective Utilization", Science, 181, 128-181 (1973)

Mr. E. E. Maroney
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We also note that the expected natural gas from this proposed lease sale is expected to provide only 1.8 to 2.7% of the 1980 shortage and the expected oil from the sale would provide for only four to six months of production at the present rate of oil use. Therefore, the completion of this proposed lease sale would not be expected to significantly alleviate the "energy crisis".

We also note the omission of any discussion of the generation of energy from ocean thermal gradients, although recent technical literature indicates that this method may be an important source of energy in the future. 1/2/. A prototype plant is now being designed for installation east of Miami due to the proximity of the energy rich Gulf Stream 1/. Apparently, the authors of the Impact Statement are unaware of this important development.

V. Based on the information presented above, we believe that the lease sale should be delayed until more information is available on the environmental impact of the proposed action. In any case, we strongly suggest the following:

1. Oil transportation -

a. No barging should be allowed due to the predicted oil spills (P.141,252) of approximately 19,700 to 32,300 bbl./year and to the expected damage to western Florida's estuaries (P.253).

b. Pipelines should not be placed where there is a possibility of disturbing toxic sediments, e.g., in Pensacola Bay (P.264).

2. We endorse the Special Stipulations relating to oil containment and clean-up equipment and to the protection of historical, archeological and architectural values. If the sale is made before a proper evaluation of the environmental impact can be performed, it is further requested that drilling be excluded from the Pensacola South tract due to the environmental danger from military explosives in the area and due to the fact that the winds and currents in the area would often tend to blow oil spills to shore (P.323, 252).

(P.296)

As an even less acceptable alternative, we would hope that oil drilling would not be undertaken less than forty (40) miles from shore. This would exclude only 41 of the 159

1/ Metz, William D., "Ocean Temperature Gradients: Solar Power From the Sea", Science, 180, 1266-1267, (1973).

2/ Zener, Clarence, "Solar Sea Power", Physics Today, January 1973, pp. 48-53.

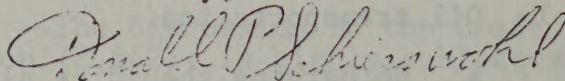
Mr. E. E. Maroney
Page 12
August 15, 1973

proposed tracts or 26% of the total. Of these 41, 26 have already been objected to on military grounds. Therefore, under this proposal, we are only asking for the exclusion, on purely environmental grounds, of 15 of the 159 tracts or 9.4% of the total sale

We note that if the proposed sale is not delayed for a period of time sufficient to develop the information necessary for a rational evaluation of environmental impact, we cannot help but believe that Florida's environment is being exposed to unnecessary and possibly severe long-term risks.

We are also unable to understand the argument (P.649) that more knowledge on the effects of OCS leases would "tend to discount information which is already known." In science, "discounted" information is generally that information that has been shown to be in error. We would hope that the Department of the Interior is not requesting that we "stick to the error of our ways."

Sincerely,



Donald P. Schiesswohl, Chief
Bureau of Environmental
Planning and Evaluation

DPS:sdm

(8) Department of Natural Resources

This Department's review comments consist of two memoranda. The first suggests consideration be given to converting offshore platforms for sport fishing and recreational needs once its original purpose has become "superfluous", and using junked pipe and other metal waste as material for establishing offshore artificial reefs. The second memorandum, from the Coastal Coordinating Council, calls for highly regulated and controlled management of OCS operations; studies should be undertaken and completed prior to any production and a continual monitoring plan be conducted during all phases of OCS development; and all onshore support and ancillary activities must be evaluated in relation to its natural and socio-economic impact on the coastal zone.

Disposition

Memo #1 - Current regulations requiring an operator to remove all evidence of operations prior to release are designed to return the area to its natural state. The retention of these structures for use by fishermen, etc., after a lease had expired or been approved raise problems of liability regarding accidents arising from the use of the structure and its ultimate removal. Regulations prohibit the dumping of equipment offshore. Similar problems regarding liability would arise if this were permitted.

Memo #2, Coastal Coordinating Council: Pg. 1, Summary -

The same OCS orders and regulations in effect offshore Louisiana and Texas will apply to offshore Mississippi, Alabama and Florida. These orders include monitoring and policing of all phases of oil field development and abandonment. See all of Vol 2, Sec. IV and Vol. 5, Attachments A and K which present the inspection report forms and the OCS operating orders applicable to this sale proposal. In addition to routine regulation, control and monitoring also see Vol. 1, Sec. I.H.5 which proposes a study plan that would include a strict monitoring of all phases of OCS development for environmental protection.

The effects associated with onshore support facilities including socio-economic concerns are presented in the FES in Vol. 2, Sec. III. H. Appropriate State and local regulations apply to placement of onshore facilities and all onshore operations will be subject to appropriate State or local controls and to Federal standards with regard to air and water quality where applicable.

Regulations already allow for an offshore operation to be shut-in. See Vol. 2, Sec. IV.A.3.

Pg. 7 - All intentional discharges such as drill cuttings, sand, produced waste water and muds from offshore platforms must comply with the Federal Water Pollution Control Act Amendment

of 1972 if they are harmful, and operators must obtain a permit from EPA as established by the National Pollutant Discharge Elimination System. (See Vol. 2, Sec. IV.D.7).

A research effort was undertaken to review the "body of scientific evidence which indicates that these (drilling) muds actually are of major significance in environmental destruction." The Coastal Coordinating Council among others was consulted but no scientific evidence was made available to us. The MIT Georges Bank Petroleum Study (1973), as noted in Vol. 2, Sec. III. B.1.b.(6), notes that effects of produced waste water, drilling muds and cuttings will be limited to the immediate locale of the platform and will be limited to a purely physical alteration of the bottom in that small area. Because all of the tracts in this proposed sale are 16 or more miles from Florida's territorial sea no pollution within that area is likely to occur from disposal of drilling muds. Our proposed study plan as outlined in Vol. 1, Sec. I.H.5 will provide information concerning the adverse effects of all such discharges as part of the monitoring program on individual lease sites.

Pg. 8 - A special stipulation has been proposed concerning pipeline corridor routes (See Vol. 2, Sec. IV.C.) and a study will be undertaken as described in the FES (Vol. 2, Sec. IV.C.). An additional detailed study concerning pipeline corridor routes is outlined in Vol. 1, Sec. I.H.5 of the FES.

Pg. 8 - Oil spills - A special stipulation proposed for application to any leases which issue should this sale proceed will provide for a 12-hour oil spill response time. See Vol. 2, Sec. IV. D.1. Also see Vol. 5, Attachment L for a complete inventory of oil spill containment and cleanup equipment available in the Gulf of Mexico. Also see our previous response in this section to Florida's Department of Health and Rehabilitative Services. Potential accidents resulting from hurricanes is discussed in the FES (Vol. 2, Sec. III. A.2.b (4)).

Pg. 11 - See the special stipulation proposed for application to all tracts in the Apalachicola South area for protection of the Florida Middle Grounds (Vol. 2, Sec. IV.D.1).

Pg. 13 - Supplementary comments, item #1: An estimate of 1,000 platforms is used which would include those expected from this sale (e.g. 75-125) and from 4-9 additional sales of comparable size in the area.

The amount of drilling mud entering the ocean is based on the number of wells drilled while under actual conditions the mud will be reused for succeeding wells drilled from a platform and disposed of in the event it cannot be sold or used at another location.

See our estimated volumes of drilling muds expected to be disposed as a result of this sale (Vol. 2, Sec. III.A.1.a and the table in Sec. III.A.4).

The calculation of formation water entering the ocean is high in that it does not consider the water to be reinjected for pressure maintenance and secondary recovery or for subsurface disposal.

As mentioned earlier the effects of these discharges will be monitored in accordance with the study plan in Vol. 1, Sec. I.H.5.

Pg. 14 - OCS Order No. 7 - For the present, lacking conclusive data concerning the impact of drilling muds, drill cuttings, sand and other liquid wastes upon the marine environment, the Geological Survey has found it necessary to balance the possible environmental impact of the disposal of such wastes into the marine environment against the potential environmental impact of transporting such material to shore and disposing of it at some onshore site. The tremendous volume of this material would require a substantial increase in barge traffic with resulting increased risk of collisions. Onshore disposal of this material would have its own environmental impact. Due to these other considerations, OCS Order No. 7 has permitted disposal of these materials into the waters of the Gulf after treatment to avoid disposal of known harmful or toxic substances. Should scientific research prove that disposal of these materials into the Gulf does in fact have a substantial adverse environmental impact, other less harmful means of disposal will be sought and OCS Order No. 7 revised accordingly. A revised OCS Order No. 7 would apply to operations on leases in existence at the time of its revision as

well as leases issued in the future under the Secretary's authority to amend any rules and regulations at any time which he determines to be necessary for the prevention of waste or conservation of the natural resources. 43 U.S.C. § 1334(a)(1).

Pg. 15, Item #2 - We have given very careful consideration to the problems associated with barging in preparation of the FES. We have included a proposed stipulation to be applied to any lease that may issue from this proposed sale that would restrict barging. See Vol. 2, Sec. IV.D.1. The idea of prohibiting barging altogether would mean that during the exploratory phases of testing and defining a field, any oil resulting during that phase would have to be burned since there would be no pipeline or barge available to haul it to shore. This would not only have an adverse effect on air quality but would be wasteful and hazardous to men and property. Therefore, the stipulation will allow for barging during pre-production activities but prohibit it during actual production except in instances relating to safe development and on a case-by-case basis to be determined by the Area Supervisor of the Geological Survey. We view this as a measure that will mitigate impacts resulting from tank barge accidents and operations and reduce the predicted barge related spills presented in Vol. 2, Sec. III.A.2.b.(7) of the FES.

Pg. 16, Item #3 - See our previous remarks to this Agency's summary comments.



STATE OF FLORIDA

Department of Administration

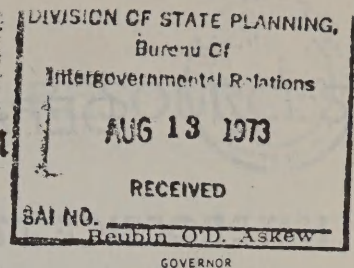
Division of State Planning

725 SOUTH BRONOUGH

TALLAHASSEE

32304

(904) 488-2401



L. K. Ireland, Jr.
SECRETARY OF ADMINISTRATION

Earl M. Starnes
STATE PLANNING DIRECTOR

TO: Mr. Randolph Hodges, Ex. Dir.
Department of Natural Resources
Tallahassee, Florida 32304
Attn: Mr. James Smith
FROM: Bureau of Intergovernmental Relations
SUBJECT: SAI: 74-0056-E

DATE: JUL 25 1973

DUE DATE: AUG 8 1973

Please review and comment to us on the above draft environmental impact statement, copy attached. In reviewing the statement, you should consider possible effects that actions contemplated could have on matters of concern to your agency.

If you feel that a conference is needed for discussion of the project or resolution of conflicts, or if you have questions concerning the statement, please call Mr. Estus Whitfield at (904) 488-2401. Please check the appropriate box below, attach any comments on your agency's stationery and return to IGR or telephone "no adverse comments" by the above due date.

On that date, we intend to consider all review comments received and develop a state position on the project. In both telephone and written correspondence please refer to the above SAI number.

Sincerely,

Chief

Bureau of Intergovernmental Relations

Enclosure

cc: Mr. William Beckham

TO: Bureau of Intergovernmental Relations
FROM:
SUBJECT: DEIS Review and Comments

74-0056-E

☐ No Comments

☒ Comments Attached From Division of Interior Resources and the Coastal Coordinating Council.

Reviewing Agency

Signature: James H. Smith

Date: 8/10/73

Title: Administrative Assistant



State of Florida
DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE MEMORANDUM

TO: E. E. Moroney, Chief
Bureau of Intergovernmental Relations
Department of Administration
SAI: 74-0056-E

FROM: R. D. [unclear]
(1)

SUBJECT: Draft Environmental Statement, Proposed 1973
Outer Continental Shelf Oil and Gas General Lease
Sale Offshore Mississippi, Alabama and Florida

Review: The draft statement adequately reports potential hazards and assured deterioration to the waters off Florida's west coast and to the beaches and biota of the coastal areas that would result as a consequence of oil and gas production. The draft also details precautions that can be taken and it outlines federal agency methods for implementing these to protect the environment.

Benefits to be derived from offshore hydrocarbon production will be shared by the people of the nation, including Florida residents. Undesirable concomittant effect of hydrocarbon production will be borne exclusively by Florida residents, under the program outlined. Proposals should be considered for an equitable balance between local and national interests, including:

- 1) In planning offshore platform spacing and design, consideration should be given to include plans for the ultimate conversion of some of these platforms for safe refuges to boaters and fishermen once a platform has become superfluous to its original purpose.
- 2) Rather than simply collecting junked pipe and other metals which accumulate in and around oil production facilities for disposal ashore, consideration should be given to the use of this material to build offshore artificial reefs as fish refuges.



State of Florida
DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE MEMORANDUM

August 7, 1973

TO : James G. Smith, Administrative Assistant
Department of Natural Resources

FROM : Bruce Johnson, Coordinator *[Signature]*
Coastal Coordinating Council

SUBJECT: Draft Environmental Statement, Proposed 1973 Outer
Continental Shelf Oil and Gas General Lease Sale
Offshore Mississippi, Alabama and Florida

The staff of the Coastal Coordinating Council has reviewed the attached project and has the following comments:

1. Due to the length of the Environmental Impact Statement, the analysis itself is rather excessive in length. We have, therefore, prepared a summary that embodies our general feelings and philosophy on the over-all subject.
2. We recommend that after reading the summary, the indepth analysis should be carefully perused for the necessary background data justifying our general conclusions.

SUMMARY

Any proposed Florida Outer Continental Shelf petroleum production must be highly regulated and controlled, to eliminate and prevent massive short-term, or marginal long-term, environmental destruction or degradation. Studies to provide comprehensive environmental evaluation of each area should be completed and evaluated prior to any actual petroleum effort offshore. A program of continual monitoring and policing is required during all phases of field development, and throughout the producing period of the field. Appropriate legislation must be available to eliminate any

major negative environmental alteration, even if at the expense of stopping operation.

The greatest apparent threat to the Florida Coastal Zone is from the standpoint of development of support and ancillary activities related to the offshore production. In each case, the probable impact of individual operations in any given area must be evaluated relative to its impact upon the environment (both natural and socio-economic) of the area.

Of the three areas discussed, the Tampa area appears to offer the fewest environmental problems and, therefore, is the one within which initial developmental activities should occur. All activities, from exploration through development and production to eventual closing of the field, must be carefully monitored to assure that no major environmental degradation occurs in response to any petroleum-oriented activity.

Draft Environmental Statement Analysis

INTRODUCTION

The United States is currently undergoing the initial phases of a major energy crisis, the principal aspects of which are indicated by substantially reduced available amounts of petroleum and natural gas. There is little question but that this crisis will be long-term and that it is imperative to carefully consider all possible alternatives to alleviate this crisis. One such alternative is development of the outer continental shelf petroleum reserves within the eastern Gulf of Mexico. It is recognized that even full development of these reserves cannot, of itself, "solve" the crisis relative to petroleum and natural gas but can only help alleviate it to a degree. All other possible actions relative to a relief of the

current and future shortages of petroleum products, plus utilization of alternative energy sources were available, must be made. The probable eventual development of the Florida OCS reserves must be accomplished only within a rigid framework of control and regulation, to guarantee that this development is not made at the expense of major environmental destruction or substantial negative environmental alteration. Such development, within a rigidly controlled regulatory structure, appears possible. With such control and additional appropriate safeguards, the development of this major petroleum and natural gas reserve, in light of the present and continuing energy crisis, is both necessary and desirable.

The major areas of concern relative to the proposed lease sale and development of the resource may be conveniently categorized within three major topics: (1) On-shore impact within the coastal zone; (2) habitat and environmental destruction and degradation both offshore and within the coastal zone; and (3) the impact of major catastrophic oil spills. Each of these general topics will be discussed in detail.

On-Shore Impact Within the Coastal Zone

From the standpoint of Florida's particular environmental and socio-economic structure, this concern is perhaps the highest relative to this discussion. The unique character of Florida's climate and economy, and their complex interrelationships are well known. The dependence of major aspects of the Florida economy upon a superior environment, highly desirable to man, is equally well established. It is imperative that any activity relative to the proposed OCS developmental program not impinge upon this superior environment, which is the primary element for the state's tourist-based economy, both now and 249 foreseeable future. Unfortunately,

it is within the coastal zone of Florida, where over 70% of its population resides, that the major potential for environmental destruction and negative alteration exists. It is recommended, therefore, that major and specific emphasis be placed upon this aspect in the development of the environmental impact statement. Specifically, the critical areas of potential impact to the coastal zone may be related to the development and location of terminal facilities, pipelines, refineries, oil-field logistic support facilities, and land transportation requirements.

On-shore terminals which receive petroleum production products from the off-shore fields may vary from rather simple "pumping station" facilities to full-fledged refinery and petro-chemical industrial complexes. The level of environmental influence, therefore, is highly variable, dependent upon the degree of development of the terminal facility. All terminal activities, no matter how small, will have a direct and immediate effect upon their local environment. Larger activities, such as refineries, will have a major effect on substantial land and marine areas in their proximity. All aspects of these effects must be carefully considered prior to any development of such a facility. Specifically, the effect upon inhabitants of the region, both human and animal must be evaluated, as well as the myriad environmental changes which will occur in response to a terminal facility of whatever magnitude.

Pipelines present a major problem both off- and on-shore, primarily from the standpoint of initial construction. The method by which pipelines are constructed is extremely important to the environment, and all safeguards must be taken to ensure that such

construction will do minimal environmental damage. In many regions the construction of pipelines would be so destructive to the natural habitat that placement should not be considered.

Refineries are discussed briefly above, as a consequence of extreme terminal development. The environmental destructive potential and capability for a major refinery complex is vast indeed, and there should be extremely careful consideration for the overwhelming necessity for refinery construction within the State of Florida prior to positive action in this regard.

Support facilities generally take the form of major service-boat port facilities, and heliports. The support function for a major offshore production activity is an extremely large and complex operation, entailing crew housing and transfer, equipment storage and transfer, boat docking and bunkering facilities, and a host of other aspects. Indeed, every activity routinely practiced within the offshore field must initiate from some on-shore facility within proximity to the offshore area. These facilities, next to refineries themselves, pose perhaps the greatest threat to the coastal zone and nearshore environment of Florida. Detailed analysis of each support activity must be made, and recommendations adapted to control any and all environmentally degrading aspects of the activity.

Land transportation requirements for a major off-shore production field are related intimately to the support-facility aspect of the field, and generally consist of a complex road system connecting most portions of the support-facility complex. Major highways are required to allow access of the huge trucks required to carry many of the large pieces of equipment necessary for support operation.

Railroad access is also probably a requirement, which may require the building of spur-lines to a major railroad.

Environmental and Habitat Destruction and Degradation

The problems addressed under this title may be conveniently subdivided into the two major categories of Outer Continental Shelf and the Coastal Zone. While a number of the problems within each of these categories are common to each, there is sufficient difference to warrant this division.

The Outer Continental Shelf area, beyond the Florida Territorial Sea, is that area that will be subjected to petroleum drilling and extraction activities. Neither of these will occur within the three-league limit of the Territorial Sea. Those activities which involve either exploratory or production drilling in the offshore area, in which water depths exceed some tens of meters, are massive undertakings requiring a highly skilled and sophisticated scientific and technological expertise. The equipment, as well as the capital investment required, is massive. While most aspects of moderate-depth offshore drilling are routine, and may be conducted at a minimal level of accident potential, catastrophic accidents still do occur. The types and kinds of such accidents, and their potential results from the standpoint of environmental destruction and degradation, need be carefully and accurately delineated and analyzed. Discounting the catastrophic-accident aspect, routine drilling operations themselves present a number of major problems from the standpoint of environmental protection. In particular, platform discharges, including formation brines, drill cuttings, and drilling mud all are potential sources for environmental degradation and

destruction. While the effects of salt-water formational brines are probably of little consequence in areas of dynamic ocean mixing, they present a problem if their chemical constitution is such that abnormal enrichment in any element may occur as a consequence of their introduction into oceanic waters. It is appropriate, therefore, to require that such brines not be injected into marine waters. Drill cuttings are generally considered to exert little influence beyond the immediate area in which they are introduced. This has not been well documented, however, and it is suggested that studies be conducted to prove or disprove this hypothesis. Drilling mud has also generally been considered a relatively minor aspect to environmental degradation or destruction in the offshore area. There is, however, an increasing body of scientific evidence which indicates that these muds actually are of major significance in environmental destruction. This question must be answered before significant drilling occurs in the Florida Outer Continental Shelf area, since the effects of this mud may be very widespread, and could have significant detrimental effects within the Florida Territorial Sea, occurring through pollution by drilling muds from platforms adjacent to the Territorial Sea boundary.

The single most destructive activity routinely occurring in offshore development, either within the territorial sea or Outer Continental Shelf area, is that of dredging for pipeline or other construction including canals and channels. The destructive effects of any type of dredging upon the environment within the area of the activity has been well documented. To minimize these effects it is imperative that such activities be kept to an absolute minimum, and that substantial safeguards and remedies be developed to help negate

the very high destructive potential of this activity, both in federal and state waters. Pipeline corridors from the offshore area to land must be utilized, to keep the destructive activity of pipeline construction contained within as small an area as possible. Studies addressing these topics are essential, and should be required. This requirement need be stated in the environmental impact statement.

Oil Spills

The catastrophic major oil spill is the single most visible, and therefore to a degree, most controversial of any aspect of petroleum production and transfer. While there is no question that a major spill does indeed cause a massive destruction to both flora and fauna, as well as to the environment itself, these effects are of a temporary nature in most respects. The natural recovery capability of a healthy ecosystem is such that the massive mortality and destruction attendant with a major spill will allow a recovery of the ecosystem, with some alteration, within a relatively few years. In those areas where the ecosystem is already stressed, however, as in the case in many areas within the coastal zone, a single catastrophic spill could well create effects that are far beyond the natural recuperative powers of the ecosystem. These environmentally sensitive areas need be identified and protected. A predictive capability need be developed which will allow the precise delineation of the geographic area likely to be affected in the event of a major spill anywhere within the production or transfer area. Along with this capability, assurances need be made that the appropriate "clean-up" equipment and personnel are available to ameliorate the effects of

the spill in any area where it may prove to be an environmental hazard. Such a capability is not presently available, and it is imperative that it be developed prior to a catastrophic oil spill occurrence. The Florida Outer Continental Shelf Region is one of relative stability, therefore the most likely natural catastrophic event which could affect the region is that of hurricanes. It has been shown that present technology can provide relatively high safeguard levels in the event of a hurricane disaster; therefore, the probability of a natural disaster triggering a catastrophic oil pollution situation appears to be at a relatively low level. Since this region is one in which there is a high probability of hurricane activity, however, it is appropriate to require the maximum safeguards by the industry to cope with this natural phenomenon.

Specific Area Discussion

The three regions under consideration for leasing in the Florida Outer Continental Shelf area may conveniently be referred to, according to their geographic proximity to known areas, as: the "Pensacola" area; the "Florida Middle Ground Area", and the "Tampa" area.

Pensacola Area

This area consists of approximately 750 square miles, with the nearest shoreline 19 miles to the north. An additional area, approximately 40 miles west-southwest consisting of 36 square miles is also considered a portion of this region for purposes of this discussion. The dominant ecotype within this area is one of a moderate to coarse sand bottom, primarily quartzitic with minor amounts of calcium carbonate detrital material, and with moderate

to low benthic invertebrate population levels. The water quality is very high, with typical oceanic characteristics from both the chemical and biologic standpoint. The current regime is a combination of wind-driven circulation, tidally induced currents, and a major eastward flowing component developed in response to the driving mechanisms of the Eastern Gulf of Mexico Loop Current. This combination of physical hydrographic factors make this a complex area to study and understand. The eastward-flowing current, in conjunction with surface wind-driven and tidal currents, has the potential to deposit major oil spills ashore in an area between Pensacola and Cape San Blas. This area contains the most beautiful white sand beaches in Florida, and are a major attraction both to tourists and local residents alike. Any level of contamination of these beaches by offshore petroleum operations is unacceptable, and the environmental impact statement should note this. The on-shore area likely to be affected by the petroleum operation is one based to a degree upon a fishing-tourism economy, but with major aspects of the overall economy related to the several large military establishments within the area. The impact upon the local economy, considering fishing, tourism and military input, must be analyzed to obtain an accurate appraisal of the changes in the present economy which will be induced by the petroleum operation. The present high level of environmental degradation within the Escambia Bay system is well documented. This estuarine ecosystem is currently stressed far beyond its assimilative capability in most respects. Further stress, as would be the case in facility-support operations relative to petroleum production activities, are not acceptable within this system. This should be clearly stated in the environmental impact statement.

It is recommended that no offshore (OCS) production be authorized for the Pensacola area unless the criteria listed above are met, and the stated objections favorably resolved.

Florida Middle Ground

This area is located 70 miles from the nearest shoreline (directly north of the area) and consists of approximately 260 square miles. This region is characterized by an undulating bottom topography, with occasional escarpments and deeply incised valleys. Most of the area is covered by a sandy-silt, coarsening to a sand near rock outcrops, which produce local bathymetric variations on the order of ten to thirty feet in the form of sheer cliffs. The rock exposed in these outcrops is a limestone of Neogene (upper Tertiary) age which consists of fossilized coral reefs and associated lithified sediment types. Living corals are commonly found on the prominences caused by these outcrops, and a large fish population is known to inhabit this region. It is a highly productive area, both from the standpoint of fishes and invertebrates, and also because of the large populations of planktonic organisms characteristic of this locale. Water quality is extremely high, and generally of oceanic type. Major currents are the Loop Current, surface wind-driven currents, and bottom tidal currents. As would be suspected with this combination of current factors, the overall current pattern is extremely complex.

Since this region is far offshore, it would have the least direct effect upon the coastal zone of any of the three regions. The same problems for shore-based support and ancillary facilities exist as in the Pensacola except that the nearest shore area is

not one of major pollution. Indeed, it is one of the cleanest and healthiest environments to be found in this area of Florida, and supports a sizeable sea-food industry, based primarily upon the world-famous Apalachicola Bay Oyster. This natural resource must not be threatened in any way. Additionally, because of the unique character of the Florida Middle Ground, with its large semi-tropical fish and coral populations, it should be well protected environmentally from possible destructive activities. Strict control and regulation of pipeline construction and drilling operations must be exercised to accomplish this.

This area appears to be a likely probable site for major development and production. This can be accomplished with minimum degradation to the unique natural environment of the Middle Ground only if very high pollution standards are developed and maintained. If assurances cannot be made that this unique biotope be preserved, in combination with petroleum development, then such development must not occur. The current level of sophistication of petroleum technology relative to developing and conducting a very "clean" operation is such that the industry is able, if willing, to meet such requirements.

Tampa

The region offshore of Tampa comprises approximately 150 square miles and is 32 miles from shore at its nearest point. The bottom sediments are primarily muddy-sands and sandy-silts. Abundant to luxurious benthic faunal development is common, including both plants and animals. Fish populations are generally high, although not at the level of the Florida Middle Ground. Water quality is generally good for marine waters, although somewhat more turbid than

those offshore Pensacola or at the Middle Ground. Currents are once more a combination of surface wind-driven, tidal, and are influenced markedly by the Loop Current, which in this area has a southward movement. The net result of these factors is to provide a situation which frequently would move a major oil spill parallel to the coastline, or even offshore of it. From this standpoint, of the three regions under discussion, this seems to present the least probability for on-shore drift of a major spill in the production area. The coastal zone region on the adjacent land is highly urbanized and has major industrial and shipping aspects. The potential for assimilation of the economic impact of the offshore production within the coastal zone is markedly higher in this area than in either of the other two.

The Tampa area, for the reasons previously stated, seems to be the most desirable for petroleum development of the three discussed. It is understood that strict control and regulation is required to provide for the cleanest operation possible, at high environmental standards. Such an operation is possible with present industrial technological capability.

SUPPLEMENTARY COMMENTS

1. Well and Platform Discharges

According to the draft EIS document, cuttings and drilling mud discharges are estimated to average 1173 tons per well. It is also estimated that there may be as many as 30 wells to a platform. This totals 35,190 tons/platform of discharge. No estimate of total platforms is given, or is probably possible at this time, but it is known that there are presently 1939 platforms in the Gulf of Mexico. A conservative estimate of an additional 1000 within the lease area

seems reasonable. With these estimates, a total of 35,190,000 tons, or over 70 billion pounds of these solids will be released into the leased area. In addition, it is stated that approximately 10,000 barrels of seawater per well will be used and ultimately released. This amounts to an estimated 300,000 barrels per platform, and 300 million barrels for the lease area. Also, waste formational water, containing little or no dissolved oxygen and large quantities of dissolved minerals (potentially degrading characteristics) will be released in amounts probably exceeding 150,000 barrels/day, or approximately 45 million barrels per year. It is stated that the cumulative and sublethal effects of these discharges are either poorly known or unknown. These aspects are minimized in the draft EIS however. It is highly important that the effects of these massive intrusions of contaminants be precisely known prior to their introduction into the natural environment.

OCS Order No. 7 (Aug. 28, 1969), Department of Interior, Geological Survey - "Pollution and Waste Disposal" section requires that "no harmful liquid waste" be released into the sea. Until it is proven that the wastes discussed above are indeed not harmful (which seems highly unlikely) it appears that this requirement is not being met, in that drilling muds, drill cuttings and sand are specifically exempted from solid waste disposal requirements; and brines and "cleaned" muds from liquid waste disposal requirements. There is no question that brines are "harmful" to the environment. The exact level of the "harm" is as yet to be determined. It is equally certain that drilling mud is also "harmful" to the environment, and may indeed be a major factor in environmental degradation relative

to petroleum exploration and production. This is noted on page 271 of the draft EIS but is not mentioned later under "Unavoidable Adverse Environmental Effects" (page 388) where it certainly should have been included.

2. Barging

It is indicated that barging operations of a duration of two to five years are anticipated, prior to pipeline completion. Current plans indicate that these operations may be served by terminals at or near Tampa and Port St. Joe in Florida. It is estimated in the document that between 4400 and 30,000 barge trips per year will be required for transfer of offshore production to the terminal facilities. A better estimate is probably within the 4400 to 15,000 trips per year range, since pipeline construction would probably obviate the necessity for barge transfer above the 15,000 trips per year upper estimate. Even using this more conservative upper limit, the number of total barge trips estimated fall within the range of 22,000 to 75,000 for the two to five year period considered. The possibility and probability of barge accidents during the transfer activities, considering this level of barge utilization is high indeed. Additionally, accident probability is much higher within the immediate area of dockage and the transfer terminal: precisely within those waters which exhibit the greatest fragility from the unknown cumulative and sub-lethal effects of petroleum spillage - the embayments and semi-enclosed waters. When it is realized that the estimates for spillage from the barging operations as given in the draft EIS range from 39,400 to 64,000 and 98,500 to 161,500 barrels of oil for the two and five year periods respectively, the

potentially calamitous results of the barging operation are clearly shown. It is, therefore, recommended that the "Prohibit Barging" option, as discussed on page 414 of the draft EIS, be implemented. Finally, page 397 of the draft EIS states that "...the long-term effects of oil spillage into the environment are not clearly understood at this time". Surely, these effects must be clearly understood prior to any consideration of an activity with the potential of spilling over 150,000 barrels of oil anywhere, but most particularly into the highly sensitive in-shore environment.

3. On-shore Activities

A total of five to eight production, storage, pumping and transfer terminals are estimated to be required for the pending lease operation. It is further estimated that each terminal activity will require 400 to 800 acres. Additionally, ancillary activities relative to supply companies, storage and warehouse facilities, docking facilities, trucking firms, heliports and on-shore transfer crew quarters may require an additional 200 to 300 acres (conservatively estimated). It is stated that the cumulative effects of these activities (and indeed, in many cases the individual effects) are "unknown" at this time. Prior to obligating coastal zone lands on the order of 600 to 1100 acres per facility (totaling 3000 to 8800 acres) to these activities, their individual and cumulative effects must be known. Though the petroleum crisis may indeed loom as a major contemporary problem, in retrospect it may seem small indeed when eventually compared to the variety of "crises" which are very real future possibilities if the multitude of "unknowns" as identified within the draft EIS are not resolved prior to the initiation of non-reversible environmentally degrading activity.

(9) Department of Transportation

This Department reviewed the DES and reports that the proposed action will not have any adverse effect on areas of its operations.

Disposition

None required.

Florida

REUBIN O'D. ASKEW
GOVERNOR



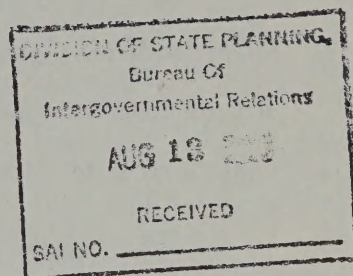
Department of Transportation

Haydon Burns Building, 605 Suwannee Street, Tallahassee, Florida 32304, Telephone (904) 488-8772

WALTER L. REVELL
SECRETARY

RAY G. L'AMOREAUX, DIRECTOR
DIVISION OF PLANNING AND PROGRAMMING

August 10, 1973



Mr. Edgar E. Maroney
Bureau of Intergovernmental Relations
Department of Administration
725 South Bronough Street
Tallahassee, Florida 32304

Dear Sir:

Subject: Draft Environmental Statement
SAI 74-0056-E
OCS Sale No. 32
DES 73-41

We have reviewed the subject report and find that the proposed project will not have any adverse affects in our areas of operations.

We appreciate the opportunity to review this statement.

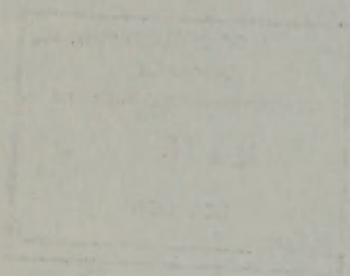
Very truly yours,

RAY G. L'AMOREAUX, DIRECTOR
DIVISION OF PLANNING AND PROGRAMMING

A handwritten signature in dark ink, appearing to read "W.N. Lofroos".

W.N. Lofroos, P.E.
Chief, Bureau of Planning

WNL:RFK/lg



(10) Florida Chapter, Sierra Club

The State of Florida included in their official review comments a critique of the DES prepared at the request of a Steering Committee of the Save Our Coast coalition. The critique is in three parts, the first prepared by Dr. Shirley Taylor, the second by Dr. John Winchester and the third by Dr. Sherwood Wise. This critique was submitted by the Florida Chapter of the Sierra Club to Florida's Division of State Planning.

Disposition

Paper by Dr. Shirley Taylor:

Alternatives - The discussion of alternatives in the FES (Vol. 3, Sec. VIII.) has been expanded and additional sources not considered in the DES have been included in the FES.

Gulf Environment - The section concerning impact on wetlands (Vol. 2, Sec. III. B. 3.) has been revised. Appropriate changes have been made concerning protection afforded marsh areas by barrier beaches.

Waste Disposal - See our previous comments relating to platform associated waste disposal problems in response to the Florida Coastal Coordinating Council. Provisions for sanitary sewage are discussed in Vol. 1, Sec. I. F. 3. e.

Inspection and Clean-up - For an inventory of oil spill clean-up and containment equipment available in the Gulf of Mexico see Vol. 5, Attachment L. Also see our response to page 8 of the Coastal Coordinating

Council's review comments. Annex X of the National Oil and Hazardous Substances Pollution Contingency Plan clearly establishes restrictions on the use of dispersants and their use must be approved by EPA except in cases involving safety (from fire or explosions) when the On-Scene Coordinator's approval is required. Federal policy in spill clean-up encourages the use of methods for physically removing oil and discourages the use of dispersants.

Cost Benefit Comparisons - A cost/benefit analysis has not been incorporated in the FES. The purpose for preparing an EIS is principally to provide decision makers and the public with the environmental consequences associated with a proposed action, given the best available information, and the alternatives to it. It is not intended to be an overall decision-making document. The FES provides a description of direct and indirect environmental effects, and places the proposed action in a functional and socio-economic context. It is left to the decision maker to compare and balance economic, technical and alternative considerations and ultimately to decide the issue. To engage in formal economic cost/benefit analysis in the environmental statement itself, would tend to obscure environmental analysis by transforming the statement into an overall decision making document centered around economic considerations and having a program justification focus.

Impact of Onshore Facilities - See Vol. 2, Sec. III. H. for revised information concerning land use and economic effects onshore.

Jurisdiction

Every conceivable effort is made to preserve and protect National wildlife refuges, parks and wilderness areas from potential harm. All such areas in the vicinity of this proposed area have been identified in the FES. Comparable areas of State control have also been identified.

Cedar Key is identified as a wilderness area. Also see our previous response to Florida's Department of Administration, Division of State Planning concerning jurisdictional matters.

Paper by Dr. John Winchester:

No mechanistic techniques such as cost/benefit analyses are presented in the FES.

The alternative section (Vol. 3) of the FES has been revised and expanded, and includes a discussion of direct and indirect solar energy utilization, among others. (See Vol. 3, Sec. VIII. B. 8. a. 5.)

Paper by Dr. Sherwood Wise:

No cost/benefit analysis has been made. Economic effects are discussed in Vol. 2, Sec. III. H. 2. In addition, BLM-New Orleans has prepared a staff report concerning onshore support facilities and economic effects associated with this proposed sale. This report will be made available upon request. The information presented by Dr. Wise was helpful to us in preparation of the FES and we would encourage readers to consult his remarks concerning cost estimates to the sport fishing and tourist industries of a major oil spill such as Santa Barbara. For matters

concerning liability for oil spills, posting of surety bonds, and others, see our previous response to the Florida Department of Administration.

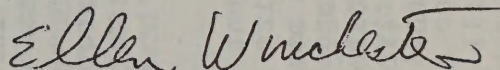
SAVE OUR COAST!
2405 Delgado Drive
Tallahassee, Fla.
August 18, 1973

Mr. Estes Whitfield
Division of State Planning
725 South Bronough Street
Tallahassee, Fla. 32304

Dear Mr. Whitfield:

The steering committee of the SAVE OUR COAST! coalition would like to bring the enclosed critique of the draft environmental impact statement on OCS logging off Florida's Gulf coast to your attention. Also enclosed is a list of the coalition members. We know that you have been concerned with the development of policy on this issue for the Division of Planning, and we would like you to have this in-put from a concerned group of conservationists.

Sincerely,



Ellen Winchester, Chairman
Florida Chapter, Sierra Club
(For the SOCI Steering Committee)

The SOC! Steering Committee requested Dr. Shirley Taylor, Chairman, Big Bend Group Sierra Club, Dr. John Winchester, Dept. of Oceanography, Fla. State University, and Dr. Sherwood W. Wise, Jr., Dept. of Geology, Fla. State University, to comment on the Department of the Interior's DRAFT ENVIRONMENTAL STATEMENT on the Proposed 1973 Outer Continental Shelf Oil and Gas General Lease Sale, Offshore Mississippi, Alabama, and Florida (OCS Sale No. 32). It is hoped that their analyses will be helpful to SOC! members in preparing their own statements for the hearing in Tallahassee on Aug. 21, 22, and 23. In connection with the hearings, please remember that if you failed to send in your registration card to the BLM office in New Orleans prior to the reception deadline of 4:15 p.m., Aug. 15, you may send written statements which may include rebuttals of testimony offered by others at the hearing to The Director, (392), Bureau of Land Management, Dept. of the Interior, Washington, D.C., 20240.

Critique on the Draft Environmental Impact Statement

By Dr. Shirley Taylor

This bulky production of the Bureau of Land Management, U. S. Dept. of the Interior, (750 pp. plus) describes (1) information on this lease proposal, (2) the Gulf areas in question, (3) environmental impacts of the proposed sale, (4) mitigating measures possible, (5) unavoidable adverse environmental effects, (6) short-term use vs. long-term productivity, (7) irreversible commitment of resources, (8) alternatives to the proposed action, (9) very large addenda.

Alternatives

The sheer mass of the statement makes complete survey and evaluation of the contents extremely difficult. The size handicapped even the writers, who were seldom able to cross-reference their own material beyond indicating "elsewhere in the statement." A considerable amount of space is filled with padding, especially in the energy alternatives section where the lengthy treatment of coal mining techniques, etc., is quite inappropriate while alternatives such as solar energy and power from the ocean are dismissed with little or no mention. The real nub of the energy problem is never addressed: that the U.S. must face squarely now the fact that our supplies within approximately the next 75 years will be totally used up. As long as the word of the day is "get out more oil" to keep our present use patterns supplied, the future is really frightening. The Impact Statement contains no examination of the benefits of deferring OCS development with a view towards possible increases in efficiency of extraction. We need planning and implementation at once of policies that will also stretch our oil supplies over more years. So long as we continue with the high horse-

power private automobile and vast road systems to accommodate it; with new houses electrically heated; with high energy use of planes replacing railroads and buses in public and business use patterns, we haven't even recognized the problem as a nation.

NEPA requirements demand a thorough examination in the Impact Statement not only of alternatives to oil drilling, techniques, and rates of extraction, but also consideration of other energy sources. This requirement is not met.

Gulf Environment

A great deal of the environmental data presented in the Impact Statement has been lifted in pieces from various recent data summaries by numerous scientists. The Statement admits that environmental problems do exist, but minimizes their importance and dismisses other factors as either unknown or unimportant. Treatment of marshes and estuaries is extremely weak, both as to their importance to the marine ecosystem and their vulnerability to oil ("it isn't likely oil will reach them"). Much is made of marshes and estuaries being protected by barrier beaches when in fact the entire stretch of marsh from Alligator Point to Clearwater has no barrier beaches.

Waste Disposal

Regarding disposal of platform drilling wastes, the Statement is most unsatisfactory. Apparently the research indicating serious effects from barium sulfate, brines, detergents, etc., is to be overlooked and only cursory care taken to avoid pollution from drill platforms. Only "solid waste" and mud containing diesel oil are to be kept out of the Gulf water. For sanitary sewage there is no provision at all.

Inspection and Clean Up

Inspection routines for oil leakage leave a great deal to be desired, apparently depending on platform crew, weekly Geological Survey helicopter fly-overs (fog? rain?), and yearly scheduled official inspections. Very little information is given about oil spill clean up techniques. In fact, one worries about the "approved chemical dispersant" which may be cosmetic only and far more damaging than leaving the oil on the surface.

Cost-Benefit Comparisons

Admission is made that minor spills are "very probable," major ones "unpredict-

able." One would expect some cost benefit analysis to be made, relating the amount of oil (2 to 3.2 billion barrels) predicted to be extracted (6 months U.S. supply) to the unavoidable physical impacts of drilling, permanent platforms, barge traffic or pipeline laying, and onshore facilities pre-empting other uses for valuable coastal land. No such comparisons are made, although figures are at times inserted on the value of oil, of Gulf fish and shellfish catch, of tourist trade, and of sport fishing. Impact on Florida waters, estuaries, beaches, marshes, and harbors, certainly deserves to be considered with something more precise than "impact is unknown at this time," when the entire future of the Gulf and of Florida's Gulf coastline is at stake.

Consideration must be given to the following facts and their interrelationships: over one-third of the nation's seafood comes from the Gulf of Mexico; Florida's Gulf coast tourist industry depending on prime beach and water amounts to \$500 million annually; sport fishing on Florida's west coast is a \$200 million industry. Balance the admitted physical interference with commercial fishing (loss of fish space) and the grave threats of pollution to fish and shellfish as well as beaches and swimming waters, against the oil estimated from this lease sale--just 6 months' supply for the U.S. Add effects of pipeline laying and leakage along the Gulf bottom and ashore, and acreage of prime coastal land that would be required for land operations. The economic answer for Florida must be to preserve her present \$700 million industries, and continue to contribute protein to the nutritional needs of the nation's expanding population.

Hazard Rating

The Impact Statement rates no sites as "minimal hazard," 53 are judged "highly hazardous" (due to interference with military operations, and unstable sediment). The remaining sites are all judged "moderate hazard potential." The decision as to how hazardous some of their "moderate" sites are should be open to considerable discussion.

Impact on Onshore Facilities

The whole question of onshore facilities is a major one involving numerous county and state priorities on land use as well as environmental considerations of land that should not be developed at all (see Fla. Coastal Coordinating Council Maps). Using the Impact Statement figures, the prediction is that 5-8 storage terminals using 20-300 acres of land each will be built. Transfer terminals are predicted in conjunction with storage areas, adding an extra 40-80 acres each. Support facilities (12-15) next to refineries themselves, pose perhaps the greatest threat to the coastal zone and nearshore environment of Florida. When one thinks about the actual Gulf

coastline this is a staggering amount of coastal land to devote to a 15-20 year program.

Jurisdiction

The important question of jurisdiction over clean operations, containment of oil spills, liability for damages from turbidity, from oil spills, are not covered at all. The necessity for dredge permits to be granted by the State of Florida is totally ignored, as is the Florida law on liability for oil spills. The whole approach of the Impact Statement tends to weaken state safeguards for the state sanctuaries (aquatic preserves). Neither is there a recognition of protection due federally designated wildlife refuges and wilderness areas. The tone varies a little based perhaps on what team member wrote which section. At one place the Statement reads "... if a support or storage facility is placed in a conservation area. . . ." Federal wildlife refuges such as St. Marks are not even mentioned, nor is Cedar Key Wilderness area. One concludes that oil development plans supercede all else. In the case of Cedar Key this is a conflict with Congressional designation as Wilderness.

Summary

The Impact Statement is deficient in its treatment of some physical and ecological data and relationships; inadequate in examination of alternatives; careless in provision for avoidance of pollution from platform wastes; ignorant or callous on jurisdictional questions. Cost benefit predictions so necessary in decision-making are altogether omitted with pleas of ignorance as to what the costs will be.

Comments on the Draft Environmental Impact Statement Dealing With Alternatives to the Proposed Lease Sale

By Dr. John W. Winchester

The Draft Environmental Impact Statement contains a long section dealing with alternatives to the proposed lease sale, with voluminous material on the technology of the fossil fuel industry. It seems clear that the primary justification of this material is to provide a basis for judging whether alternative energy sources are preferable to the oil, but much of the technical discussion seems only remotely connected, e.g., the great detail given for methods of mining coal in surface and subsurface deposits. Non fossil fuel energy sources are considered only briefly and

not in a way which makes it easy for a Florida resident to decide with confidence between the alternatives.

The Impact Statement gives no quantitative cost/benefit analysis for the alternatives, including an estimate of the likelihood of benefit. The projected reserves in the MAFIA CCS are only estimates and the values of these should be calculated statistically and compared to the estimates and probabilities of solar energy resource development within various time limits. Only by such a quantitative comparison can a citizen judge where to place his greatest hopes for the future. The Impact Statement in its present form makes quantitative comparison of the alternatives virtually impossible, and it therefore is inadequate.

In revising the Impact Statement for a fuller treatment of the alternatives, the Bureau of Land Management should consider the following: (a) A comparison of research and development investment in solar or other alternative energy sources with capital investment required for the oil exploration and production operations, including amount of energy we can expect in varying time frames from 5 to 50 years. (b) A careful evaluation of advanced technology which has resulted from aerospace, oceanography, and other areas of major national efforts for potential of application to energy resource development. The present Impact Statement, in its descriptive description of coal mining methods and minimal explanation of other technology, reveals considerable lack of imagination and knowledge of hard breasier engineering, geophysics, and other fields of possible direct relevance to the problem at hand. (c) A comparison of all the energy resources of Florida, e.g., oil, nuclear, and solar. This may permit a value judgement to be made on how Florida can best serve the national interest in supplying energy, and this can also be compared with other ways Florida serves the national interest, e.g., by its tourism, fisheries, and other resources. (d) A most careful evaluation of solar energy potential in the state of Florida should be carried out.

In the Draft Impact Statement there is no coverage given to solar energy as a renewable source except for a brief statement dismissing this alternative on two grounds: (a) Solar energy presumably cannot be harnessed on large enough scale until after 1980. (b) The subject is covered in the Environmental Impact Statement for the Trans Alaska Pipeline System, where interested persons can learn for the of intention. However, elsewhere in the Impact Statement it is made clear that the proposed oil drilling would lead to production only for a short time, 5-15 years, and that appears to be an inadequate duration to justify dismissing such an alternative as solar energy for consideration here. Moreover, the Impact Statement does not make sufficiently clear that the projected 2.0 to 3.2 billion barrels of oil of the lease areas constitute only 4 to 6 months' supply of oil in the U.S. at present national

consumption rates. Since this is such a small amount of oil, alternative energy sources must be considered now, and this Impact Statement should give careful treatment of the solar energy alternative.

Direct utilization of solar energy by solar water heaters, heat pumps, and electric power converters may now be far more promising than many non-specialists customarily believe because of recent advances in materials science which may lead to easy breakthroughs in the practicality of direct solar energy use. In addition, indirect solar energy use from ocean temperature gradients is now under active discussion in the physics literature (1, 2) and this oceanographic source of energy may be of enormous size. The Gulf Stream alone can supply 1000 times the energy in the form of electric power than the proposed oil resources in the lease sale could supply, and a prototype plant is now being designed for installation east of Miami. Apparently the authors of the Impact Statement are unaware of this important development.

Although nuclear energy is treated in a general fashion, there are serious omissions of material which, if included, may drastically change a reader's regard for this alternative. Nuclear energy is not examined from the standpoint of Florida's energy resources, and no mention is made of Florida's uranium deposits. The Florida Department of Natural Resources (3) has pointed out that the phosphate industry currently discharged 6000 tons per year of U_3O_8 (although apparently not at the current government regulated price of \$8-10 per pound). The energy equivalent of this recoverable uranium in a conventional nuclear power plant is that of 440,000 barrels per day of oil and in a breeder reactor perhaps 10-50 times more. Comparing the projected oil production rate in this lease of 360,000 to 590,000 barrels per day of oil (plus an additional 20% of energy equivalent as natural gas), the present wasted energy resource is seen to be approximately the same (and much greater in breeder reactors). Moreover, the oil reserves are calculated to be depleted in about 15 years whereas the ultimately recoverable uranium from Florida's phosphate deposits is given as 600,000 tons of U_3O_8 or one-fifth of the free world supply recoverable at less than \$15 per pound of U_3O_8 . It is a severe oversight not to mention these important facts in the Environmental Impact Statement.

¹ Clarence Zener, "Solar Sea Power," Physics Today, January 1973, pp. 48-53.

² W. D. Matz, "Ocean Temperature Gradients: Solar Power from the Sea," Science, 180, 1266-1267, 22 June 1973.

³ "Environmental Geology and Hydrology, Tallahassee Area, Florida," Special Publication No. 16, Bureau of Geology, Florida Dept. of Natural Resources, 1972.

In judging our national ability for mobilizing our scientific talent for meeting well defined challenges, we should keep in mind our excellent record in developing the atomic bomb between 1939 and 1944 and for landing a man on the moon in 1969 after less than ten years of effort. Perhaps a one year delay in the oil drilling project would give us enough time to assess our energy options and make a wiser public decision.

Commentary on Economic Considerations
In the Draft Environmental Impact Statement

By Dr. Sherwood W. Wise, Jr.

Although the Environmental Statement identifies in a general way the possible impacts of the proposed OCS lease sale on the environment,¹ no attempt is made to assess the economic costs of such impacts in terms of dollars and cents. This failing makes it most difficult to assess the commercial aspects of the proposal. Local governments and businesses, therefore, will find obvious difficulty in weighing the potential risks to them against the possible benefits that may accrue from this enterprise. One also cannot determine what reasonable sums of money the oil producers or operators should expect to expend on remedial and compensatory measures to commercial interests or governments in the event of a negative impact, such as a major oil spill on beaches or primary fishing areas. Such information will be most useful if the producing companies are required to post surety bonds before drilling operations begin.

Computing Cost Estimates to the Sports Fishing Industry.

Cost estimates of the negative impacts outlined in the Draft Environmental Statement can be made. However, it is apparent that those portions of the Statement

¹ A matrix analysis is attempted (p. 317) to analyze possible adverse impacts on the environment and related uses. Since the weight given to the factors involved and the scale for evaluating the results is arbitrarily set by the same party, this crude analysis is somewhat an exercise in circular reasoning. More useful and objective would be an analysis system based on probability. The type of question that needs to be answered is "what is the probability that a major oil spill at location X will impinge on the beach at location Y."

pertinent to the formulation of such estimates have not been researched with care. For instance, a passage on page 304 of the Statement which concerns the impact of a major oil spill on sports fishing states that "we have no conclusive evidence" on the effects of such a spill. On the contrary, the effects on sports fishing during a major oil spill (Santa Barbara Channel, February, 1969) has been well documented by the California Department of Fish and Game (1969) which determined that the number of fish taken from partyboats operating out of Santa Barbara declined during the period February-July, 1969, when the reported landings were only 10% the size of those in the same months for the previous four years (California Department of Fish and Game, 1969, Table 5; see also Straughan, 1973, p. 9). The California Fish and Game Department found that:

The major portion of this decline can unhesitatingly be attributed to lack of fishing effort (Table 6). Because of the adverse publicity of the oil spill, sportsmen fished elsewhere. The total number of boat days during the six-month period was only 13% of the average fishing effort for a comparable period during the previous four years. Only 723 sportsfishermen used partyboat facilities at Santa Barbara during this period in 1969, while 5,693 used them in 1968.

Assuming that a similar spill were to occur in the lease sale area off Destin and Panama City, Florida, the economic costs of a 90% reduction in partyboat fish landings in that area could easily be calculated, and should be made known to fishing and governmental interests of those areas.

Cost to the Tourist Industry.

Similarly, the cost to the tourist industry of a major oil spill impinging on the beaches of Destin or Panama City could be calculated. It seems probable that any oil spill residues are likely to persist on Florida beaches until some action is taken by man to clean them up. Oil residues consisting of tar mats 2 to 3 centimeters thick still remain today on the shores of Santa Barbara Channel in areas that have not been subjected to vigorous cleansing activities of man or nature. One such area witnessed by this writer in May, 1973, lies adjacent to the campus of the University of California at Santa Barbara where thick tar mats left from the February, 1969, spill cover extensive portions of the rocky shore line. Under the continual wave action, these mats provide a source of fine tarry particles which foul the splash zone of the adjacent sand beaches. This condition will obviously continue for many years to come.

Most sand beaches in Southern California are today free from the 1969 spill effects. This is due largely to a natural seasonal cleansing action which does not

occur along Florida beaches. Most beaches in California experience cyclical sand erosion and replenishment on a seasonal basis. Many of the beaches affected by the Santa Barbara spill are "back-to-front beaches" meaning that sand is eroded from the beaches during late winter and early spring, and then replenished during the summer and fall. This cycle is controlled by the shift in Pacific storm centers from the Gulf of Alaska during the winter to the New Zealand area during the summer. The net effect during the Santa Barbara oil spill was that tars and contaminated beach sand were removed and carried out to sea shortly after the spill by the natural erosion cycle. The beaches were subsequently replenished with clean sand from offshore the following summer.

Low Wave Energy Won't Clean Florida Beaches.

Florida beaches do not undergo such a cycle. In fact, in some areas wave energy is so low and distributed in such a way that these areas of coast are known as "zero energy environments." The net effect of these conditions is that in the event of a major oil spill on Florida beaches, man will have to count primarily on his own resources to restore oiled beaches to their natural condition. The cost of such an operation can certainly be calculated. The time such an operation will take and the expected adverse effect on beach utilization by tourists along with the concomitant loss of commercial revenue can also be calculated.

Recommendations.

Because some of the prime fishing and beach areas of Florida lie in close proximity to the proposed drilling sites, and because negative economic effects of a major oil spillage in these areas can be calculated in terms of dollars and cents, it is recommended that such calculations be carried out and appended to the Draft Environmental Statement. In order to insure prompt relief of any commercial interests or local governments adversely affected by oil spillage within Florida waters, it is further advised that the Environmental Statement recommend that prospecting companies post suitable bonds in advance of the commencement of drilling, with the provision that such monies be used to reimburse commercial interests of governments for any loss of revenue experienced during such a disaster.

References

California Department of Fish and Game, 1969, Progress report of wildlife affected by the Santa Barbara Channel Oil Spill, January 28-March 31, 1969.

Straughan, D., 1973, Biological Studies of the Santa Barbara oil spill, in Santa Barbara Channel region revisited. Am. Assoc. Petroleum Geologists Guidebook, Field Trip 3, 1973 Annual Meeting. pp. 4-16.

SAVE OUR COAST

A coalition of conservation and other groups concerned about the impact of Gulf oil exploration on Florida's coastal environment.

Aug. 18
Members as of ~~5-10-77~~ 1978:

Florida Chapter, Sierra Club
Florida Defenders of the Environment
Florida Wildlife Federation
Florida League of Women Voters
Environmental Action Group, University of Florida
Environmental Action Group, Florida State University
The Sanibel-Captiva Conservation Foundation, Inc.
Crystal River Protective Association, Inc.
Choctawhatchee League for Environmental Awareness Now
Florida Federation Zero Population Growth
Alachua Audubon Society
Pelican Island Audubon Society
Cypress Chapter Izaak Walton League of America
Florida Technological University Council
for Social Studies
~~Island Audubon Society~~
Environmental Council of Bay County
Save Sand Key
Flagler Audubon Society
Francis H. Weston Audubon Society
Environmental Law Society - Univ. of Florida
Save Our Bay -- Tampa
Lake County Conservation Council
Save Our Beach - Pensacola
Orzelle Audubon Society

Bridge Izaak Walton League
committee of 100 - J22

While the organization of SAVE OUR COAST is intended to remain loose, with each participant contributing to public education in the manner best considered best, communication within the coalition will make possible a sharing of materials that will facilitate for educational purpose. The coalition's existence will also address the leadership of the state out of the notion that Florida's citizens intend to participate fully in their share of the decision making process regarding offshore oil leasing as provided by the National Environmental Protection Act.

Aug. 17/1973

Meeting Attendance Record

DEIS Proposed 1973 Outer Continental Shelf, Oil and Gas Lease Sale Offshore Miss., Ala., and Fla.

standing

Name	Agency
Mr. Wm S. STUART	DEPT. TOLLN. CONT.

Mr. JERRY OKNER

ATTORNEY GENERAL

Mr. JAMES H. SAYES

Dept. of Community Affairs

J. P. Huff

DOT

Mr. James E. Jones

FCCC

Mr. BRAD HARTMAN

GFC

Rep. Albright

Mr. Pat Hume

Office of the Treasurer
Office of Comm. of Ed.
Attorney General

Mr. Ken Hoffman

Mr. Helen McEninch

Field Operations/Trustees

John Felt

DOT

Gov. Felt

Div. of State Planning

Verdon Keys

FLA. Div Health

JAY LANDERS

State DARE

Estus Whitfield

GOV. OFFICE

Div of St. Planning

3. Public Hearing Testimony and Record

On August 21 through August 23, 1973, the Department held a public hearing in Tallahassee, Florida for the purpose of receiving views, comments and suggestions relating to the Proposed 1973 Outer Continental Shelf (OCS) Mississippi, Alabama, and Florida General Lease Sale.

Presiding over the hearing was Administrative Law Judge Forrest E. Stewart. The hearing panel consisted of Jack O. Horton, Assistant Secretary for Land and Water Resources; Dr. Kenneth Lay, Deputy Under/Secretary for Energy; Mr. King Mallory, Deputy Assistant Secretary, Energy and Minerals; Mr. Richard Waller, representing the Assistant Secretary for Fish, Wildlife and Parks; and Dwight Patton, Staff Assistant, Minerals, Office of the Assistant Secretary - Land and Water Resources. Backing up the hearing panel was a technical panel of representatives from the Washington Office of the Bureau of Land Management and the Washington and New Orleans Offices of the Geological Survey.

Three hundred and twenty-two persons submitted oral and/or written testimony for the hearing record. They represented Federal, state, and local government units, national, state, and local environmental groups, the petroleum and related industries, segments of the manufacturing, agricultural, and service sector, utility and service companies, universities, professional organizations, citizens' organizations, and private citizens.

Comments concerning the proposal ranged from total opposition to total support. In between comments ranged from delaying the sale until additional analyses were conducted and more of the unknowns of environmental impact were known to strengthening OCS rules and regulations or awaiting the improvement of a fail-safe offshore technology. Where inaccuracies in the data presented in the draft statement were pointed out, changes have been made. Where omissions of information were cited, they were added to the statement. In all cases, specific information has been incorporated into the statement.

The hearing record including a 1,274 page transcript of the oral testimony, and all written testimony submitted is available for inspection at the Office of the Manager, Gulf Outer Continental Shelf Office, Bureau of Land Management, Suite 3200, The Plaza Tower, 1001 Howard Avenue, New Orleans, Louisiana 70113, and at the Office of Public Affairs, Bureau of Land Management (130), Washington, D. C. 20240.

Numerous detailed comments were received. In those instances where comments received at the hearing were those of State governmental agencies which were officially requested to provide comments, they are contained in full in the immediately preceding section of this statement. The following categories of issues along with the range of statements concerning these issues are cited below.

ENERGY CRISIS AND ENERGY ALTERNATIVES

1. Numerous comments indicated the need to develop offshore oil and gas because of the increasing demand for these energy fuels combined with a decreasing supply. This situation has caused cutbacks in deliverability of these energy fuels with accompanying periodic cutbacks in various sectors of the economy in terms of production and employment.

In addition, concern was expressed in terms of converting one fuel source to another in the short-run. Testimony indicated that this process was taking place at an increased cost. In addition to already present shortages, projections were presented to indicate the worsening supply situation in the short-term period.

2. Numerous individuals expressed concern over imports as an alternative and/or a supplement to offshore oil and gas because of the insecurity and recent foreign governments' policies concerning these supplies. See section VIII. B. 7. for a discussion of imports.

3. Individuals stated that the reserves from this sale should be explored and held in reserve until such time as it becomes critical to develop them.

The concept of storing oil as a reserve for future use is discussed in the import section of the alternatives (section VIII. B. 7.)

4. Individuals stated that the alternative energy sources discussed in the statement should be analyzed on a cost-benefit basis.

See our position concerning cost-benefit analysis expressed earlier in response to Dr. Shirley Taylor's paper submitted by the Florida Chapter, Sierra Club, under State of Florida, Item #10.

5. Individuals stated that solar energy, and uranium from phosphate deposits should be treated as alternatives to the proposed action, specifically as they would affect Florida.

A discussion of these sources of energy is contained in the alternatives section of the statement. (Section VIII. B. 8.)

6. Individuals stated that the Government should exert greater pressure in reducing energy demand rather than developing these particular off-shore energy resources.

A discussion of energy conservation is found in the alternatives section of the statement. (Section VIII. B. 1.)

7. Individuals stated that energy development should push ahead at all fronts - offshore development and research effort on long-term energy sources, in order to meet the nation's energy needs.

ENVIRONMENTAL IMPACT OF DEVELOPMENT OF THE OFFSHORE OIL AND GAS RESOURCES

1. Numerous individuals stated that the development of the oil and gas resources of this area could proceed without undue environmental risks, and without undue conflict with other activities, such as commercial and sport fishing in the Gulf of Mexico. They cited the historical development of oil and gas in other areas of the Gulf of Mexico over the last 25 years, industry's technology and government rules and regulations as indicative that these operations could proceed in an environmentally safe manner.

2. Individuals stated that the development of these resources could not take place without undue environmental risks. They cited previous development in the Gulf and the government's rules and regulations as not providing adequate environmental protection.

The alternative of withdrawing the sale is discussed in the alternative section.

3. Individuals stated that the environmental risks of oil and gas operations and the probability of oil spills damaging the coastline did not warrant the sale taking place. They stated that there were too many unknowns in the analysis for a rational judgment to be made at this time. Among the unknowns cited were the lack of knowledge of the effects of chronic low level pollution, the unpredictability of major oil spills, and the effects of drilling muds.

All of these matters are addressed in appropriate sections of the FES. See especially Vol. 2, Sec. III.

4. Individuals stated that base line studies of the hydrocarbon pollution of Florida waters now and during and after exploration and production should be conducted. See the study plan as outlined in Vol. 1, Sec. I. H. 5. which will include, among other things, base line studies.

5. Individuals stated that pipeline corridors be designated and areas be identified and classified as environmentally sensitive areas to be used only when other pipeline alternatives are not available. See Vol. 1, Sec. I. H. 5. and Vol. 2, Sec. IV. C.

6. Individuals recommended that at a minimum high risk tracts be deleted from the sale. This is considered in Vol. 3, Sec. VIII. A. 2. of the FES.

7. Individuals recommended that an offshore preserve be created opposite the 100 miles of Miracle Strip Beaches in Florida from Pensacola to Mexico Beach and oil drilling prohibited from the area. Alternately, a recommendation was made to classify the area as a high hazard area in terms of oil drilling with stipulations dealing with strict liability, availability of on-site clean-up equipment, availability of funds and adjudication machinery to quickly deal with claims for damages from an oil spill, posting of surety bonds to cover damages from spills.

The alternative of not leasing these tracts is discussed in the alternative section of this statement. The environmental impact analysis of

this area indicates that oil and gas development can take place without undue damage or conflict with other activities. The proposal itself examines stipulations considered to be necessary to mitigate potential adverse environmental effects (see section on Mitigating Measures).

Because of the compatibility of uses in the area the complete prohibition of oil development through the creation of a preserve is not considered necessary.

8. Individuals recommended that tracts off Tampa be deleted while others indicated that tracts off Tampa should be the first to be leased.

See Vol. 3, Sec. VIII. A. 2. of the FES.

9. Individuals stated that leasing should not proceed in the Florida Middle Ground area because of the coral located in this area and the potential adverse effect of drilling muds. See the special stipulation providing additional protection to this area, Vol. 2, Sec. IV. D. 1.

10. Individuals recommended that all tracts off Florida should be deleted from the proposed offering because the potential environmental risks were unacceptable. See Vol. 3, Sec. VIII. A. 2. of the FES.

11. Individuals stated that the cumulative effects of leasing in this offshore area should be discussed in addition to the impact from this proposed sale.

This proposed lease sale offshore Mississippi, Alabama and Florida is the only sale identified in this area on the Department's Proposed Schedule

of Provisional OCS Leasing. No previous oil and gas development has taken place in this area. It would be premature and virtually impossible to predict at this time the cumulative effects of leasing in this area. Need for additional sales in this area cannot be determined until the results of drilling and production resulting from this proposal are available.

12. Individuals stated that the sale should not proceed until the Coastal Zone Management Act of 1972 is funded and implemented.

A discussion of delaying the sale pending completion and implementation of onshore plans is contained in the alternative section of this statement. Also see our response to page 27 of the Florida Audubon Society's review comments (Sec. IX. B. 4.(3) and to the Department of Commerce, Sec. IX. B. 1. j. of this volume concerning the Coastal Zone Management Act.

13. Individuals indicated that the sale should not proceed until a more sophisticated and safer technology for offshore operations is developed. This is discussed in the alternatives section (see Vol. 3, Sec. VIII. C. 4.).

14. Individuals indicated that no barging should be allowed. See Vol. 2, Sec. IV. D. 1. providing a stipulation to restrict barging.

15. Individuals indicated that tracts should be deleted from the Mobile area where rigs would be visible from Dauphin Islands.

The closest tract to Dauphin Islands is over 14 miles away. A drilling rig or offshore platform, although it could be seen with the naked eye on a clear day from this distance, would appear as no more than a fly speck on the horizon.

LOCAL AND REGIONAL ECONOMIC IMPACT

1. Numerous individuals testified concerning the positive regional and local economic impact of OCS oil and gas leasing in terms of employment, income and the tax base. The stimulating effect of offshore leasing was emphasized. See Vol. 2, Sec. III. H. 2.
2. Individuals testified that oil and gas leasing offshore Florida would have an adverse economic effect on Florida's tourism and the military operations of Tyndall AFB and the U.S. Naval Coastal Systems Laboratory and that the sale should not proceed until the effects are known. These matters are addressed in Vol. 2, Sec. III. F. and H.
3. Individuals indicated that the statement should contain a more thorough analysis of onshore ancillary activities; the effects of development on the human and animal environment and a detailed analysis of each support facility. See Vol. 2, Sec. III. and our responses to official comments from State of Florida agencies in Sec. IX. B. 2. of this volume.
4. Individuals suggested that the sale be delayed for a number of reasons; such as, until additional base line data is developed, and until the Florida State growth plan is finalized. See Vol. 1, Sec. I. H. 5., Vol. 3, Sec. VIII. C. 2., and Vol. 2, Sec. III. H.
5. Individuals suggested that a referendum be held in Florida before any action is taken. This is a matter that would be more properly raised with appropriate State of Florida officials.

DEPARTMENT'S RULES AND REGULATIONS

1. Individuals testified that the Department's regulations should call for tighter inspection programs and shorter periods between supervised tests of all safety controls. See Vol. 1, Sec. I. H. 2., and Attachments A and D of Vol. 5.
2. Individuals suggested that stipulations be placed in leases calling for absolute liability of the oil company for damage caused from a spill; stipulations requiring cancellation of a lease for oil spills or blowouts. See our response to Florida's Department of Administration in sec. IX. B. 2. c. of this volume.
3. Individuals suggested that a fund be established to cover the costs of spills. See Sec. IX. B. 2. c. of this volume.
4. Individuals suggested that adjudication machinery be established and made available to the small property owner to prevent costly court cases in the event of a spill. See Sec. IX. B. 2. c. of this volume.
5. Individuals suggested that the three recent reports on OCS operations, namely, "Applicability of NASA Contract Quality Management and Failure Mode Analysis Procedures to the USGS Outer Continental Shelf Oil and Gas Lease Management Program" (NASA, 1971); Outer Continental Shelf Resource Development Safety (National Academy of Engineering, 1972); and "Improved Inspection and Regulation Could Reduce the Possibility of Oil Spills on the Outer Continental Shelf (GAO, 1973), be discussed in terms of the implementation of their recommendations. See Vol. 1. Sec. I.H.2. and Vol. 5, Attachment D.

4. Other Public Comments

In addition to the Public Hearing Record, 160 comments were received from the petroleum and petroleum-related industries, utilities, local governments and individuals. Each expressed his ideas concerning the proposed sale. These comments were taken into consideration in the preparation of the final statement.

Figures 1-3 summarize the pro and con comments received. Included are the number of comments, the source of the comments and the reasons for support or opposition.

All of the specific environmental issues that were raised in these comments have also been contained in the official comments or the summary of the hearing record, both printed in this volume. Appropriate responses and/or revisions have been made in the environmental statement to properly reflect these comments.

Figure 1.. Number of Comments by Source

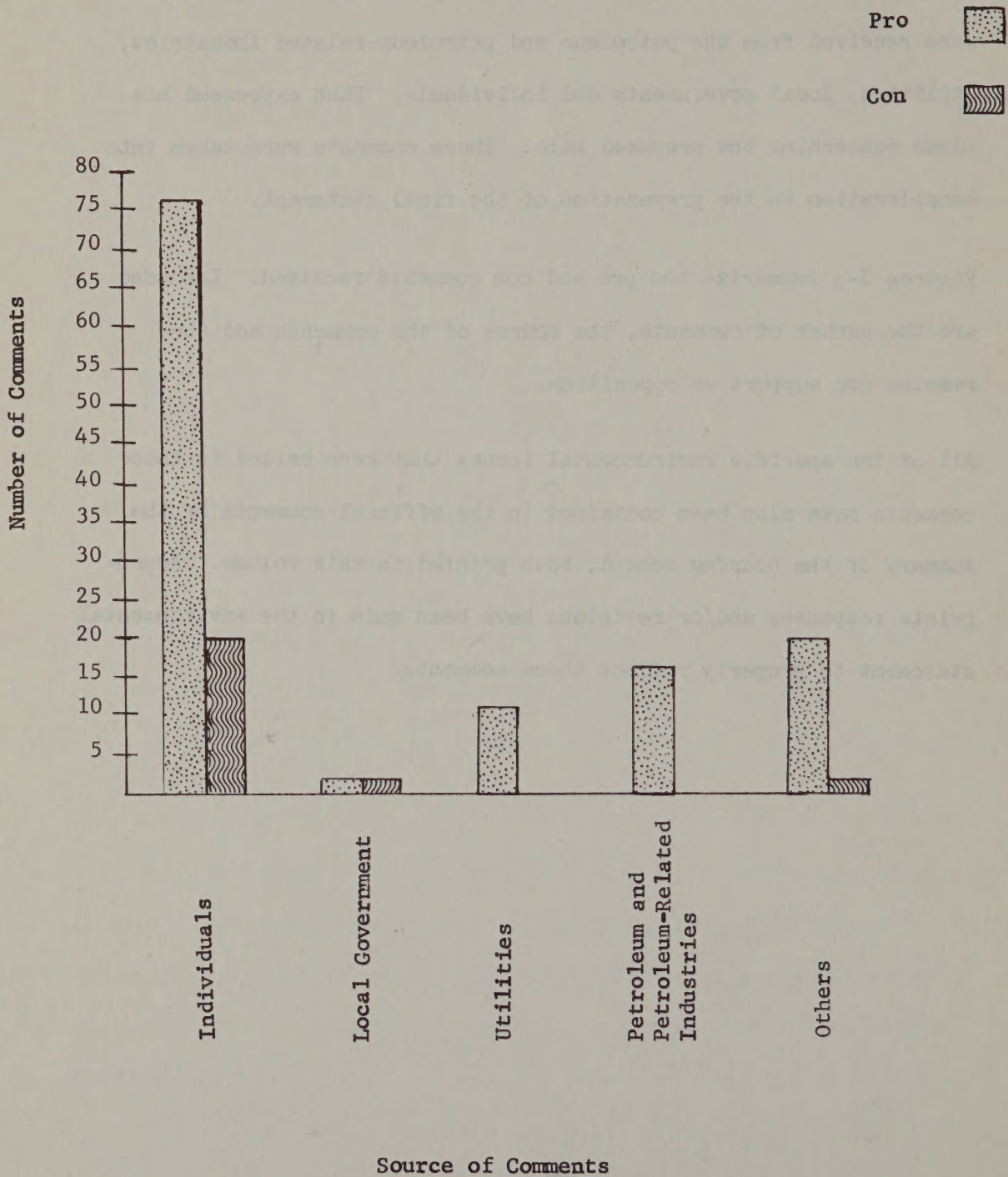


Figure 2.. Frequency of Reasons Cited in Support of Proposed Sale

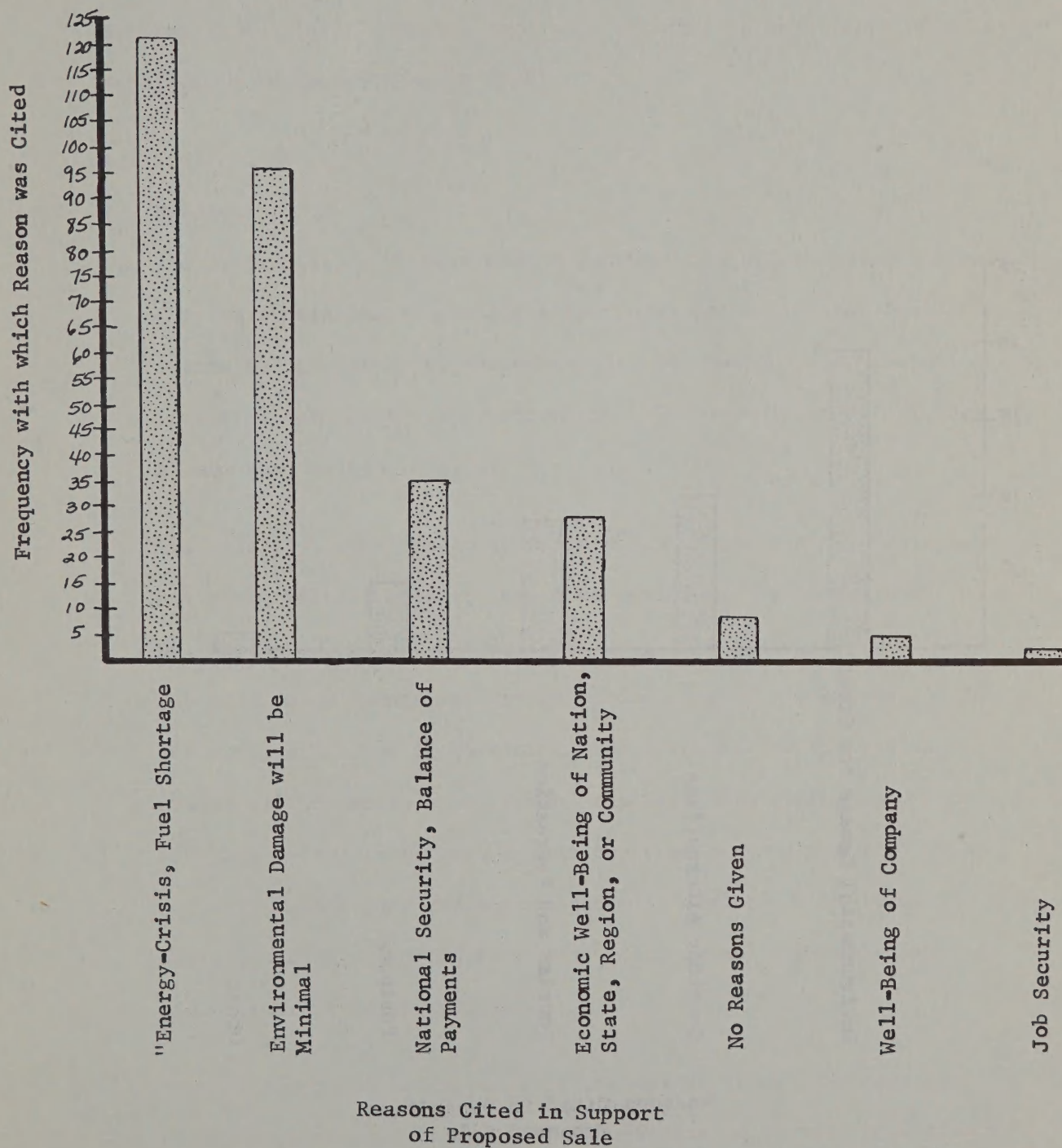
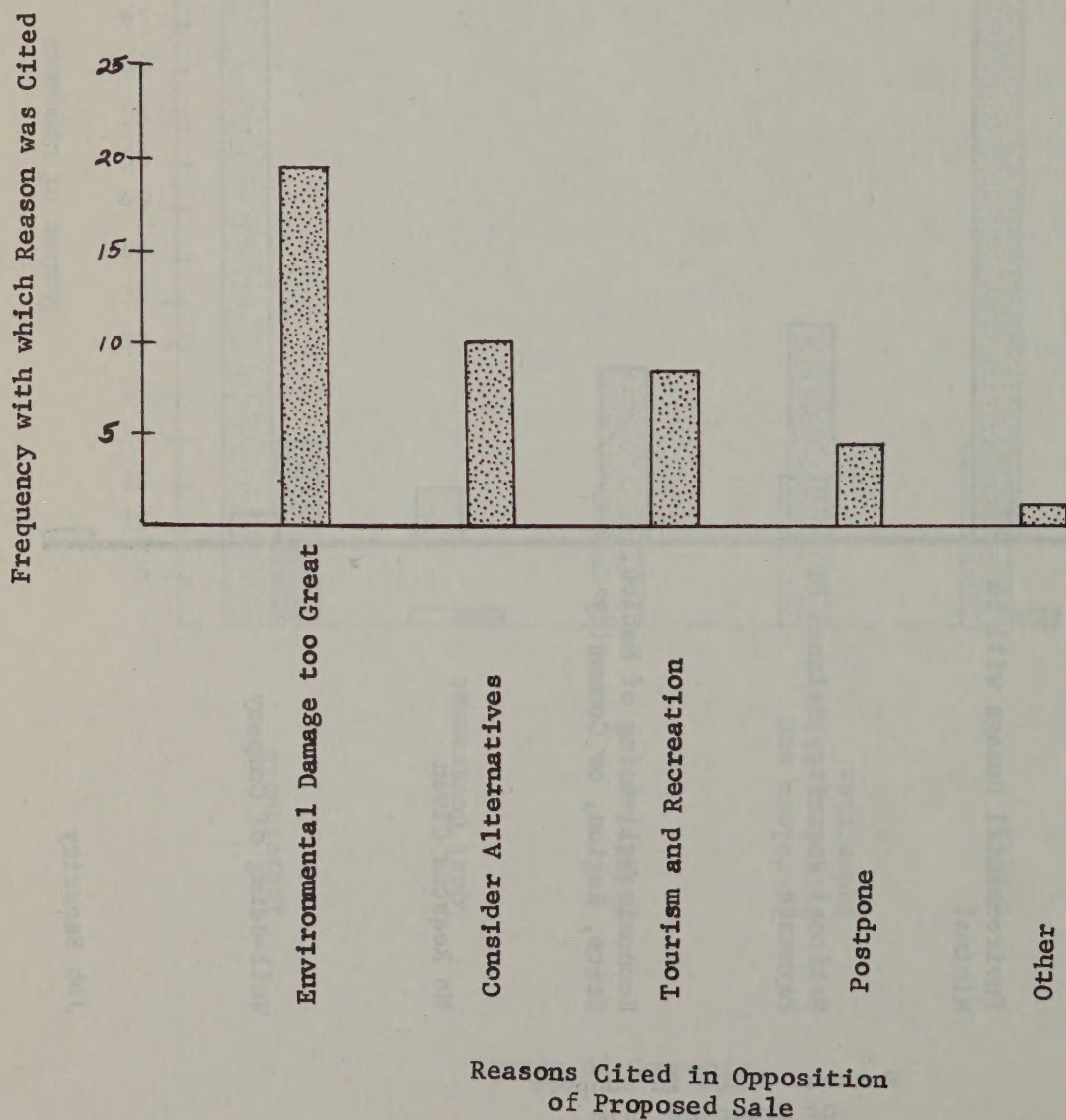


Figure 3.. Frequency of Reasons Cited in Opposition of Proposed Sale



The Sierra Club, the Florida Audubon Society and the Natural Resources Defense Council reviewed the Draft Environmental Statement (DES) and due to the substantial content of their comments they have been treated separately and their comments have been attached below as part of this Final Environmental Statement (FES).

a. Sierra Club

Disposition

Pp. 1 & 2, item (1) - We have made a considerable effort using historical data to statistically predict intentional and accidental polluting events and to quantify, wherever possible, the scope of these potential hazards to the environment. See especially Vol. 1, Sec. I. F. and Vol. 2, Sec. III. A.

Historically, there is no question that the petroleum industry has had a significant adverse impact on Louisiana's wetlands and Dr. Sherwood Gagliano's research, among others, confirms this. In the past, much damage was caused by dredging of rig access canals for exploration and production in the marshes. No rig access canals will be made in any marsh area as a result of this proposed offshore sale. Therefore, damage to marshes resulting from this activity in the past and associated with onshore or State of Louisiana controlled offshore production is not considered in the FES because it is inapplicable.

None of the published studies of coastal wetlands loss contains high enough resolution to allow an estimate to be made of wetlands

loss attributable to pipeline canals. Pipeline canals in marsh areas could result from this proposed sale unless measures are taken to prevent them. This of course would be a matter of concern to appropriate state authorities. For our part, we have proposed that common carrier pipelines be routed to shore through corridors and we have proposed studies to help us in our determination. (See Vol. 1, Sec. I. H. 5. and Vol. 2, Sec. IV. C.) We will make every effort to coordinate this effort with appropriate state authorities should this sale proceed.

Item (2) - We have made an effort wherever possible to identify any potential environmental harm that could result as a consequence of our proposed action. This effort is admittedly restricted with regard to potential impacts resulting from installation and operation of ancillary onshore support facilities. We have identified the types and numbers of such facilities that we expect could result if our proposed action proceeds, based on past experience and industry estimates, and their land use requirements. (See Vol. 2, Sec. III. H.) We have also examined the respective States' land use plans and the economic effects these support facilities among other activities might have on the coastal zone in the area of the proposed sale. However, until exact site locations for these facilities are established by the respective State and local authorities working with industry representatives, and until methods of installation and operation have been approved, it will

not be possible to move from the realm of conjecture to the realm of environmental analysis and predictability.

The possibility that there may be incompleted studies so germane to this proposed action as to justify postponement of this proposed sale until they are completed is considered in the alternative section of the FES. See Vol. 3, Sec. VIII. C. 2.

Item (3) - See Vol. 2, Sec. VI & VII.

Item (4) - See our previous response to the Florida Chapter, Sierra Club (Dr. Taylor's paper) concerning cost/benefit analysis.

Item (5) - A full discussion of studies recently completed which are critical of OCS practices and regulations is included in the FES. See Vol. 1, Sec. I. H. 2. and the Work Group Study report in Vol. 5, Attachment D. Alternative regulatory schemes are considered especially with regard to restricting barging, providing a mechanism for pipeline corridors, additional protection for Florida Middle Grounds area, archeological values and commercial fishing activities. See Vol. 2, Sec. IV. C. & D.

Item (6) - The purpose of this proposed action is to help meet national needs not just Florida's. However, Florida does have certain energy sources that might help meet national needs (e.g., uranium associated with phosphate, direct and indirect solar energy). The alternatives section of the FES has been revised and expanded to include additional energy sources. See especially Vol. 3, Sec. VIII. B. 8.

Item (7) - We agree that national security implications associated with OCS leasing are important considerations for decision makers in establishing national energy policy. These matters are more properly the subject of documents other than environmental impact statements.

Item (8) - We have complied with all Federal requirements concerning preparation of draft statements in consultation with appropriate Federal, state and local agencies.

Pp. 2-3 - Procedural Defects - The DES was made available to anyone free upon request and its availability was publicized. Two public meetings and a Department of the Interior sponsored public hearing concerning this proposed sale were held in Florida. Many private organizations attended the public meetings, submitted formal comments at the public hearing and reviewed the DES. All of their comments and views were considered in preparation of the FES.

Postponement of the proposed sale until studies are completed, as previously noted, is considered in the FES. The EPA's review comments of the DES should be consulted concerning this matter and also the study plan described in Vol. 1, Sec. I. H. 5.

The purpose for preparing a draft environmental statement on a proposed action significantly affecting the quality of the human environment has been met. The FES reflects the extensive review process to which the draft was subjected and the consideration given to the comments and issues raised during this process.

Pg. 3 - Recurring Difficulties: Onshore Environmental Destruction -

We have responded to the issues in this first paragraph under items 1 and 2 above. In the last paragraph on page 3 of Sierra Club's comments the statement is made that "OCS drilling activities have resulted in such an unexpected deterioration of marshlands that it has been designated as Louisiana's number one environmental problem." As evidence to support this statement, the Sierra Club draws from the excellent and valuable research conducted by Dr. Sherwood Gagliano of the Sea Grant Development's Center for Wet Land Resources, Louisiana State University. The use of Dr. Gagliano's research to justify such a statement represents a gross misinterpretation of valuable scientific evidence concerning Louisiana marshland loss problems.

It is important to distinguish between oil and gas activities in Federal areas of submerged lands on the Outer Continental Shelf (OCS) and oil and gas activities in State offshore and onshore areas of production. OCS production does not require the construction of rig access canals in marshes. Rigs are towed or barged to offshore locations via the Intra Coastal canal and the open sea. Therefore, land loss attributable to construction of rig access canals, which have been very damaging to Louisiana's marshes, is not associated with OCS drilling or production activities. In other words, no rig access canals in marsh areas will result as a consequence of this proposed MAFLA sale.

Pg. 4, last paragraph - We view unrestricted barging as an unsatisfactory method to transport oil from an offshore field to shore. See the proposed stipulation that would restrict barging (Vol.. 2, Sec. IV. D. 1.). We view pipelines as the most preferable method environmentally for transporting oil to shore. We believe the corridor route stipulation and the studies previously noted give added emphasis to this position.

Pg. 5 - Recurring Difficulties: Regulatory Weakness - See Vol. 1, Sec. I. H. 2. and Vol. 5, Attachment D for steps being taken by the Geological Survey in response to these studies.

Pg. 5 - Analysis of Onshore Impact - See Vol. 2, Sec. III. which has been revised and includes a discussion of the points mentioned on pages 5-6 of Sierra Club's comments. See our response to the Florida Department of Legal Affairs concerning "ultimate destruction of the state's three tourist and fishing industries."

Pp. 7-8 - Analysis of Offshore Impact - All of these matters were considered in preparation of the FES. Where appropriate, changes were made and information revised. This is especially true with regard to Vol. 2, Sections III. E., F., and K. concerning ship traffic, conflict with military activities and risk analysis.

Pp. 9-11 - Alternatives - We have carefully reviewed the excellent comments and useful information presented by Dr. John Winchester in preparation of our revised energy alternatives section. Included

in the alternatives (Vol. 3) is a section on direct and indirect solar energy utilization and a discussion concerning Florida's recoverable uranium in the nuclear power section. As stated previously, however, no cost/benefit analysis is presented in the FES. Our position with regard to cost/benefit analysis is stated earlier in response to Dr. Shirley Taylor's paper submitted by the Florida Chapter, Sierra Club. (See our response in this volume, under State of Florida, item #10.)

Pp. 12-14 - Mitigating Measures and National Policy Considerations -
See our response to items #(5) and (6) above.



by Ansel Adams in *This Is the American Earth*

SIERRA CLUB

Mills Tower, San Francisco 94104

516 13th Street
Tuscaloosa, Alabama 35401
August 30, 1973

Honorable Rogers C. B. Morton
Secretary of the Interior
United States Department of the Interior
Washington, D. C. 20240

Re: Draft Environmental Impact
Statement for Oil and Gas
General Lease Sale Offshore
Mississippi, Alabama, Florida
(DES 73-41)

Dear Secretary Morton,

The following comments concerning the Draft Environmental Impact Statement on the Proposed 1973 Outer Continental Shelf Oil and Gas General Lease Sale Offshore Mississippi, Alabama, Florida, DES 73-41 (hereinafter referred to as the "Draft Statement") are forwarded to you on behalf of the Sierra Club.

The Sierra Club is a national conservation organization with an established history of concern for the coastal and ocean environment. Club members have supported measures such as the California coastal initiative of 1972 and the federal Coastal Zone Management Act of 1972. In the last year we have seen increasing popular and legislative awareness of the need to protect the integrity of the coastal ecosystem continues apace. The cumulative effort of onshore support facilities for offshore drilling, unrestrained dredging and filling, and ocean dumping of petrochemical wastes have led to the destruction of a large percentage of our coastal marshlands. This destruction has come about not through any orderly planned assault but as a cumulative result of thousands of separate activities carried on for private gain at the public expense. We fear that the opening up of the Eastern Gulf of Mexico to offshore drilling is another example of this cumulative strain on the American coastline.

The Sierra Club is concerned about this proposed lease sale because the environmental hazards appear to outweigh the economic benefits. Assessment of the proposal is made more difficult by the failure of the Bureau of Land Management (hereinafter referred to as "the Bureau") to file an impact statement which satisfactorily addresses our concerns.

(1) The Draft Statement fails to give the decision maker historical perspective on past oil drilling activities on the outer continental shelf which would give some sense of the scope of the environmental hazards encountered. Offshore drilling involves the introduction of heavy industry.

into the sensitive estuarine zone. The Draft Statement fails to disclose the extensive coastal destruction suffered in Louisiana as a result of laying pipelines and construction of access canals. Further, historical perspective is lacking in that the Draft Statement does not reveal the haphazard scheme of regulation and enforcement carried out on the Louisiana outer continental shelf by federal authorities.

(2) The Draft Statement fails to disclose the serious likelihood of environmental degradation to the area's coastal resources, cloaking substantial impacts by reference to a half dozen uncompleted studies.

(3) The Draft Statement fails to disclose that the execution of the proposal may be an irreversible and irretrievable commitment of the Gulf of Mexico's renewable resources to a single short term use in extracting a depletable resource.

(4) The Draft Statement fails to balance the admitted grave environmental risks to the area's tourist, fisheries, and scenic resources against the benefits derived from the 6 months supply of oil expected to be gained from this lease sale.

(5) The section on Mitigating Measures which stresses the U.S. Geological Survey's regulatory and enforcement measures is gravely deficient in that it doesn't disclose the heavy criticism to which that agency has been subjected and it does not examine alternative regulatory schemes.

(6) The Draft Statement does not discuss alternatives in a meaningful manner and ignores energy sources unique to Florida.

(7) The Draft Statement fails to explore the national security implications of a crash program of exploitation of OCS oil.

(8) The Draft Statement is deficient in procedural respects; the authors having solicited opinion from a limited circle of governmental interests.

Procedural Defects:

The sheer disorganized mass of 800 loose pages has made a thorough analysis and evaluation of the Draft Statements contents in the weeks allowed difficult. It appears that the size or lack of organization handicapped even the writers, who were seldom able to cross reference their own material beyond indicating that information on the subject would be found "elsewhere in the statement." A considerable amount of space is spent in inserting basic material reproduced from primary biology and geology texts as padding. Alternatives particularly significant for Florida such as solar energy and power from the ocean are dismissed with little or no attention. It appears that the drafters spent more time in xeroxing, cutting, and pasting than in reading, thinking, and writing.

A serious defect in the procedure followed was the failure to solicit the opinion of environmentally oriented organizations in the Gulf Coast area.

The Draft Statement was not circulated to private organizations interested in the environment such as the Alabama League of Women Voters, the Florida Defenders of the Environment, or the Alabama Conservancy with a request for comments as is done by agencies with more experience in the preparation of impact statements.

Because of the possibility of serious harm to the Gulf's ecosystem and economy it is distressing to see the Draft Statement brush by important issues merely noting that studies were under way. The lease sale should be delayed until the studies listed on pages 344, 345, 357, 374, and 378 are made public and included in a new revised draft impact study. We understand that BLM's study of short and long term effects of oil spills on marine biota has faltered due to lack of funding. We recommend that the Bureau not depend on petroleum industry sponsored research to produce the answers to these crucial questions. We believe scientific inquiries of so sensitive a nature require funding free from self interest in delineating the nature of the problems to be investigated. We fear a form of funding that might have an interest in "studies that are never really completed...rarely reach definite conclusions with wide applicability.." the kind referred to on page 649 as a reason for not delaying the sale on the basis of incompleting studies.

Following the publication of a revised draft environmental impact statement, public hearings should be scheduled in Mississippi, Alabama, and Florida to solicit state and private response to the revised proposal. A Florida hearing site for Alabama off shore drilling is inconvenient and expensive for private citizens who wish to be heard on this important issue but who can not match the expense accounts of the oil companies who crowded the Tallahassee hearings with their personnel.

Discussion of Environmental Impact:

We believe that the Draft Statement has not adequately addressed a number of environmental problems and, accordingly, it can not be relied upon by the decision maker in assessing the environmental impact of the proposed action. The decision maker should be informed of environmental difficulties incurred in past offshore activities.

Recurring Difficulties: Onshore Environmental Destruction:

Any environmental impact statement on proposed offshore drilling in the eastern Gulf of Mexico should assess the impact of drilling offshore Louisiana over the past 25 years. The assessment should focus on the unexpected and indirect consequences of oil production as well as the often mentioned impact of oil spills and secondary development onshore.

Experience with offshore drilling in the Gulf of Mexico has revealed unexpected adverse environmental impacts. The expected hazard resulting from drilling on the Louisiana outer continental shelf was a decline in the fisheries resource. This appears not to have come about. But OCS drilling activities have resulted in such an unexpected deterioration of marshlands that it has been designated as Louisiana's number one environmental problem. In a paper delivered at the American Association for the Advancement of Science in December 1972, Professor Sherwood Gagliano of the Louisiana State University

Office of Sea Grant Development's Center for Wet Land Resources explained that the onshore support facilities and the extensive channelization and canal dredging to move drilling equipment through the marshes have resulted in detrimental changes in runoff, tidal patterns and salt water intrusion. Through detailed studies of maps and photographs of the area made periodically during the past 30 years, scientists at LSU have established that the deltaic coast of Louisiana is no longer gaining new land as it has for the past 4,000 years. Rather it has been losing land at the phenomenal rate of 16 1/2 square miles per year. The LSU measurements document a total loss of approximately 500 square miles during the past 30 years. According to Dr. Gagliano, the mineral extraction industry is responsible for 65% of the total dredging and drainage canals which in turn are responsible for approximately 40% of the total land loss in the coastal area.

In November 1972, Louisiana's Attorney General, William J. Guste, in a speech to the Society of Petroleum Engineers stated, "The marshes are lacerated by the exploration, production and logistic operations of the oil and gas industry, -- the treasures of the coastal zone are under devastating attack."

Scientists in the field of coastal studies warn that unless immediate and drastic restrictions are imposed on unbidden development our most important natural systems and renewable resources areas will be lost before wise coastal zone planning can be implemented pursuant to the 1972 Coastal Zone Management Act.

As Dr. Gagliano's research shows, past experience with oil facilities in the ocean have resulted in unhappy and unexpected consequences. This experience should be outlined for the decision maker in order to give historical perspective to the present proposal. The experience of marsh destruction from unregulated offshore drilling in Louisiana is an example of the oil companies carrying on industrial activity in the estuarine and ocean zone without considering the environmental impact and unexpected consequences of their actions. These same interests now want to drill offshore Florida. Further expansion of oil industry activities in the coastal and estuarine zone may well be an irreversible and irretrievable commitment of the ocean's resources to a single short term use.

The Draft Statement does not discuss this problem which has been the major environmental problem associated with drilling in Louisiana. The statement declares that the oil will be barged out. Barging, however, is a temporary means of transport used when an offshore field is being developed, as Mr. L. C. Soileau III, President of Chevron Oil Company explained at the Tallahassee OCS hearings on August 22, 1973. The Draft Statement's emphasis on barging as a means of getting the oil out misleads the reader and the decision maker. If oil is found, pipeline construction and onshore impact are certain to follow.

Recurring Difficulties: Regulatory Weakness:

Furthermore, historical assessment of the experience of environmental consequences of drilling offshore Louisiana should be made because of the Draft Statement's silence on the fact that the inspection and enforcement duties of the U.S. Geological Survey have not been satisfactorily executed. This is documented in the General Accounting Office's July 1973 Report to the Conservation and Natural Resources Subcommittee of the Committee on Government Operations of the House of Representatives entitled, "Improved Inspection and Regulation Could Reduce the Possibility of Oil Spills on the Outer Continental Shelf." The Revised Draft Statement should also discuss the procedures recommended by the National Aeronautics and Space Administration (NASA) in their report entitled "Applicability of NASA Contract Quality Management and Failure Mode Effect Analysis Procedures to the USGS Outer Continental Shelf Oil and Gas Lease Management Program." The Report states on page 3, "In summary, the lack of identifiable quality control organizational elements, primary reliance on inspection and wide-spread objection to written procedures or recordkeeping indicates a significant lag in quality control and reliability technology in OCS operations. The need for improved equipment and methods for off-shore operations is recognized; however, the need for and use of quality and reliability techniques as aids to effecting this needed improvement is not yet generally appreciated by industry."

Analysis of Onshore Impact

The Statement fails to reveal to the decision maker the full possibilities inherent in the proposal of environmental degradation to the Mississippi, Alabama, Florida coastline. The Statement admits that environmental problems do exist, but minimizes their importance and dismisses the threatening factors as either unknown or unimportant. Treatment of marshes and estuaries is extremely weak, both as to their importance to the marine ecosystems and their vulnerability to oil; the Statement taking the position that oil is unlikely to reach beaches. Much is made of the marshes and estuaries being protected by barrier beaches when in fact the entire 250 mile stretch of coastal marshes from Alligator Point to Clearwater has no barrier beaches. On page 276, the Statement admits that, "No information has been found concerning the effects of oil in the Gulf states wetlands."

The Statement repeatedly confesses ignorance on the part of the projects proponents. On pages 69-70, impacts are briefly described which could result in the ultimate destruction of the three state's tourist and fishing industries. The Statement at page 70 briefly acknowledges,

"The effect on air and water quality is unknown. The overall significance of these effects on a cumulative basis are unknown, but are considered adverse. There will be a cumulative effect resulting from solid and liquid waste disposal and any oil polluting events

should they occur. The effect will be physiological stress and death for oiled plants and animals and possible contamination of marine food sources for man. The scope, duration, location and overall significant effects of an oil spill on a cumulative basis are unknown."

The Statement acknowledges on page 311 that, "The environmental effects associated with onshore support facilities are unknown at this time because potential sources of pollution resulting from these activities are not well understood."

The Statement acknowledges on page 303 that the potential for loss or damage to items of historical and archaeological interest is clear, but that assessment of the scope of the impact of the project on these items could not be determined at this time.

On page 276, the Statement asserts that the impact of the proposal on birds would not be great, but admits that the barging of oil presents an "unknown risk factor." Comparable confessions of ignorance of the impacts on marine animals and fish are made on pages 257 and 258. No recognition is given to the endangered role of the marine and wildlife sanctuaries in the National Wildlife Refuges strung along the perimeter of the lease sale area.

The Statement admits on page 396 and in other sections that the writers do not have information concerning the effects of chronic low-level oil spills. Chronic pollution from nickel and dime oil spills has been named by officials of the Louisiana Wildlife and Fisheries Commission as a serious problem in that state.

The Statement appears to assume that onshore facilities will cause only a temporary impact. It ignores the continuing effects of the permanent loss of wetlands which will be replaced by installations producing contaminating effluents which will have a further impact on the remaining coastal marshes.

Storage terminals, pipeline terminals, transfer terminals, onshore support facilities, including cement, mud, and chemical suppliers, for the offshore drilling platforms all eat up land, most of it coastal marshes. The Statement acknowledges that these facilities are also destructive of beaches, eliminating 20 - 100 acres per terminal plant (p. 300). This estimate is probably a gross underestimation of the effect that secondary development is going to have. To lay pipeline in watery areas, canals have to be dredged, and the canals not only make it easier for pollution to enter the marshes, but destroy marshland and marsh creatures through spoil banks, changed salinities, and loss of habitat. Yet the Statement alleges that data about the foreseeable 480 - 800 miles of pipelines needed for this lease sale alone, cannot be determined until such time as the exact locations of production have been delineated. We submit that until the extent of these destructive activities can be more accurately predicted, no accurate determination of the environmental impact of this lease sale can be made.

Analysis of Offshore Impact:

The Statement acknowledges on page 251 that, "sooner or later a major spill will result if this proposal is implemented. We are certain that thousands of minor spills will occur."

Chronic pollution from oil in the ocean poses a threat to marine life, and recreational and fishing resources. The health of the marine and coastal environment is a pressing national priority which should be an overriding concern in all oil operations.

Oil is becoming one of the most widespread contaminants of the ocean, Dr. Max Blumer at Woods Hole Oceanographic Institute has estimated that 1 million to 10 million metric tons of oil per year may be entering the oceans from all sources. Most of this influx takes place in coastal regions, but oil slicks and tar balls have also been observed on the high seas. Investigators have found that tar balls were more abundant than the normal sargassum weed in the open Atlantic, and that their nets quickly became so coated with tar and oil that they were unusable. Thus, oil pollution of the sea has become a global problem of great (though inadequately assessed) significance.

The reader of the Statement is shocked to read at page 400,

An irreversible or irretrievable commitment of fish and wildlife resources and their habitats could occur in the areas of a massive oil spill or if frequently subjected to chronic low levels of oil pollution. At this time, there is insufficient evidence to conclude that low level spillage has led to an irreversible commitment of fish and wildlife resources but there is enough evidence to indicate that this is a possibility that deserves close attention, and constant study.

Yet, the Statement's discussion of the crucial ecological questions is clouded by a string of unknowns and of uninformative references to incompleting studies.

With respect to the stability of the rigs themselves, it is unsettling to note that the Draft Statement rates no sites as "minimal hazard," 53 as "highly hazardous" (due to interference with military operations and unstable sediment,) and all the remaining sites as having moderate hazard potential. For that reason alone, how can the writers of this Draft Statement allege that the possibility of a large oil spill is low? Indeed, the writers admit that based on past performance, that sooner or later a major spill will result if this proposal is implemented. (p. 251) Such highly hazardous areas should never have been offered for sale.

A serious deficiency in the Statement is the lack of information on the effects of chronic, long range, low-level oil pollution. This results from spills that unquestionably take place all the time. In addition to the spillage anticipated from barge traffic accidents, of up to 32,000 barrels per year the Statement cites the probability of 14,500 to 23,500 barrels of oil a year being spilled from drilling operations. Low-level spills occurs at platform to barge transfer points, on the ocean floor, at pipeline joints, at storage facilities, constantly, everywhere oil is used or handled. Such

spills go into a marine environment that also receives a heavy dose of petroleum hydrocarbons from ocean dumping of chemical wastes, from the runoff of lubricating oils running into sewers, from air pollution, and from an incalculable number of sources, no one knows what the long range result is going to be for the life in the sea or for the life on the land that feeds upon the sea.

The Draft Statement acknowledges that oil will be spilled as a result of barge accidents, but it does not disclose the role that increased numbers of vessels making many trips will play in increasing the likelihood of collision. The section of the Statement dealing with oil spilled as a result of barge traffic accidents at pages 229 to 223 should be compared with pages IV-11 to IV-27 of the Maritime Administration's Impact Statement on the Supertanker program (NTIS Report No. 730725-F) which explains that collisions are a function of congestion. With increased traffic in a small area, the likelihood of traffic accidents increases. The Draft Statement postulates that up to 32,000 barrels of oil will be spilled each year as a result of such accidents. This figure is reached by a methodology which we believe deserves reconsideration. The writers of the Draft Statement reached this figure by comparing the number of barrels carried by U.S. flag tankers and the amount of oil reported spilled. The resulting percentage was then applied to the expected annual production from the lease sale area. The application of a general average figure results in too low an estimate of the oil which will be spilled in the crowded barge lanes. It does not reveal to the decision maker the environmental consequences flowing from the heavily increased traffic which will result from the barging out of the oil. The marine transportation segment causes the most pollution of any segment of petroleum production.

Alternatives:

The following comments on the Draft Environmental Impact Statement's section dealing with alternatives were prepared by Dr. John Winchester, of the Department of Oceanography of Florida State University.

The Draft Environmental Impact Statement contains a long section dealing with alternatives to the proposed lease sale, with voluminous material on the technology of the fossil fuel industry. It seems clear that the primary justification of this material is to provide a basis for judging whether alternative energy sources are preferable to the oil, but much of the technical discussion seems only remotely connected, e.g., the great detail given for methods of mining coal in surface and subsurface deposits. Non fossil fuel energy sources are considered only briefly and not in a way which makes it easy for a Florida resident to decide with confidence between the alternatives.

The Impact Statement gives no quantitative cost/benefit analysis for the alternatives, including an estimate of the likelihood of benefit. The projected reserves in the MAFLA OCS are only estimates and the values of these should be calculated statistically and compared to the estimates and probabilities of solar energy resource development within various time limits. Only by such a quantitative comparison can a citizen judge where to place his greatest hopes for the future. The Impact Statement in its present form makes quantitative comparison of the alternatives virtually impossible, and it therefore is inadequate.

In revising the Impact Statement for a fuller treatment of the alternatives, the Bureau of Land Management should consider the following: (a) A comparison of research and development investment in solar or other alternative energy sources with capital investment required for the oil exploration and production operations, including amount of energy we can expect in varying time frames from 5 to 50 years. (b) A careful evaluation of advanced technology which has resulted from aerospace, oceanography, and other areas of major national efforts for potential of application to energy resource development. The present Impact Statement, in its extensive description of coal mining methods and minimal examination of other technology, reveals considerable lack of imagination and knowledge of heat transfer engineering, geophysics, and other fields of possible direct relevance to the problem at hand. (c) A comparison of all the energy resources of Florida, e.g., oil, nuclear, and solar. This may permit a value judgement to be made on how Florida can best serve the national interest in supplying energy, and this can also be compared with other ways Florida serves the national interest, e.g., by its tourism, fisheries, and other resources. (d) A most careful evaluation of solar energy potential in the state of Florida should be carried out.

In the Draft Impact Statement there is no coverage given to solar energy as a renewable source except for a brief statement dismissing this alternative on two grounds: (a) Solar energy presumably cannot be harnessed on large enough scale until after 1980. (b) The subject is covered in the Environmental Impact Statement for the Trans Alaska Pipeline System, where interested persons can look for the evaluation. However, elsewhere in the Impact Statement it is made clear that the proposed oil drilling would lead to production only for a short time, 5-15 years, and that appears to be an inadequate duration to justify dismissing such an alternative as solar energy for consideration here. Moreover, the Impact Statement does not make sufficiently clear that the projected 2.0 to 3.2 billion barrels of oil of the lease areas constitute only 4 to 6 month's supply of oil in the U.S. at present national consumption rates. Since this is such a small amount of oil, alternative energy sources must be considered now, and this Impact Statement should give careful treatment of the solar energy alternative.

Direct utilization of solar energy by solar water heaters, heat pumps, and electric power converters may now be far more promising than many non-specialists customarily believe because of recent advances in materials science which may lead to easy breakthroughs in the practicality of direct solar energy use. In addition, indirect solar energy use from ocean temperature gradients is now under active discussion in the physics literature.

(See Clarence Zener, "Solar Sea Power," Physics Today, January 1973, pp. 48-53.

W. D. Metz, "Ocean Temperature Gradients: Solar Power from the Sea," Science 180, 1266-1267, 22 June 1973.)

and this oceanographic source of energy may be of enormous size. The Gulf Stream alone can supply 1000 times the energy in the form of electric power than the proposed oil resources in the lease sale could supply, and a prototype plant is now being designed for installation east of Miami. Apparently the authors of the Impact Statement are unaware of this important development.

Although nuclear energy is treated in a general fashion, there are serious omissions of material which, if included, may drastically change a reader's regard for this alternative. Nuclear energy is not examined from the standpoint of Florida's energy resources, and no mention is made of Florida's uranium deposits. The Florida Department of Natural Resources has pointed out that the phosphate industry currently discharges 6000 tons per year of U_3O_8 (although apparently not at the current government regulated price of \$8-10 per pound). The energy equivalent of this recoverable uranium in a conventional nuclear power plant is that of 440,000 barrels per day of oil and in a breeder reactor perhaps 10-50 times more. Comparing the projected

oil production rate in this lease of 360,000 to 590,000 barrels per day of oil (plus an additional 20% of energy equivalent as natural gas), the present wasted energy resource is seen to be approximately the same (and much greater in breeder reactors). Moreover, the oil reserves are calculated to be depleted in about 15 years whereas the ultimately recoverable uranium from Florida's phosphate deposits is given as 600,000 tons of U_3O_8 or one-fifth of the free world supply recoverable at less than \$15 per pound of U_3O_8 . It is a severe oversight not to mention these important facts in the Environmental Impact Statement.

In judging our national ability for mobilizing our scientific talent for meeting well defined challenges, we should keep in mind our excellent record in developing the atomic bomb between 1939 and 1944 and for landing a man on the moon in 1969 after less than ten years of effort.

Costs and Benefits:

The National Environmental Policy Act mandates a rather finely tuned and systematic balancing analysis for each separate proposal. The Bureau is under the duty in drafting an impact statement on the proposed lease sale to "identify and develop methods and procedures -- which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decision-making along with economic and technical considerations." Environmental amenities will often be in conflict with economic and technical considerations. To consider the former along with the latter must involve a balancing process. That effort has not been made in this Draft Statement.

No attempt is made to assess the benefits derived from immediate extraction of oil in the area (2 to 3.2 billion barrels which is the equivalent of 6 months U.S. supply at 1980 levels -- or the equivalent of one 60,000 tanker of imported oil a day) with the costs of the environmental hazards only partially revealed in the Draft Statement. No comparisons or attempted balancing of costs and benefits is made although figures are inserted on the value of oil, of the Gulf fisheries, of tourist trade, and of sport fishing. Impact on the three state's waters, estuaries, beaches, marshes, and harbors is passed off repeatedly with the phrase, "impact is unknown at this time." No attempt is made to balance the admitted physical interference with commercial fishing and the grave threats of pollution to fish and shellfish as well as to beaches and recreational areas against the short term relief to be provided by the oil estimated from this lease sale.

The matrix analysis attempted on pages 317 to 338 does not satisfy the balancing process demanded by the National Environmental Policy Act. The weights given to the various factors and the reasoning used in constructing the scale is not explained in detail to the reader and decision maker. Such a matrix analysis tends to cloak the circular reasoning of the proponents. A study of the Draft Statement on the proposed lease sale suggests that the environmental analysis offered is a post facto justification of a leasing decision which has already been made.

Mitigating Measures:

Section IV, Mitigating Measures Included in the Proposed Action, is seriously deficient. The authors of the Draft Statement devote most of their attention in this section to the regulations and the inspection and enforcement programs of the U.S. Geological Survey suggesting that such activities are mitigating measures for the environmental hazards inherent in the proposal. At page 344, the authors state, "Reasonably safe development of oil and gas resources on the OCS can be achieved through strict enforcement of lease stipulations and obligations, (detailed in the OCS operating regulations and orders) and must be based on sound operating practices backed by effective contingency actions in the event that pollution occurs as a result of a natural disaster, human error, or equipment failure." The Draft Statement lists the Regulations and the OCS Orders and briefly discusses such matters as operator inspection and testing, reports, safety devices, waste disposal, site clearance, debris, contingency

plans, inspection procedures, warnings, suspensions, enforcement, fines, etc. The Draft Statement is silent as to the fact that the regulations and enforcement procedures governing offshore drilling have come under intense criticism both from the General Accounting Office and the National Aeronautics and Space Administration. The GAO report, a 38 page booklet, was significantly entitled, "Improved Inspection and Regulation Could Reduce the Possibility of Oil Spills on the Outer Continental Shelf". The failure of the Draft Statement to examine alternative regulatory schemes is a basic defect in the document. The failure to mention the substantial criticism voiced in these two documents amounts to an act of deception toward the decision maker for whom the Draft Statement was prepared. A more detailed analysis is required regarding the adequacy of present regulations, a disclosure of the criticisms mentioned above, and a candid discussion of the steps necessary to correct these deficiencies.

National Policy Considerations:

Nothing is as environmentally damaging as war and we believe that the search for peace and international stability is the most pressing environmental problem. A realistic assessment of our nation's resources coupled with a commitment to the stewardship of the necessities of national life is a first step in insuring America's security in the international arena. If we are a country that runs on oil, then, we cannot, indeed, afford to run short. National security requires an assured supply for future decades. Leaders of other countries understand this. Henry Simonet, Vice President of the European Common Market Commission with responsibility for energy has stated that fuels such as oil and gas are not like other commodities since the very existence of industrial production and the life of the state depend upon their supply. Simonet's March 1973 proposal to the Common Market's Council of Ministers would put oil companies doing business in Europe on five-year plans with strict regulations, similar to the type experienced by public utilities in the United States.

An awareness of the strategic importance of oil on the outer continental shelf was shown by President Harry S. Truman who set aside the submerged lands on the continental shelf as a Naval Petroleum Reserve stating,

In view of the great demand for oil by the Government for defense purposes, it is of the utmost importance that the vast oil deposits in the Continental Shelf, which are assets of all the people of the United States, be conserved and utilized for the national security. --- In order that these great reservoirs of oil, which belong to all the people of the United States and are of such crucial importance from the standpoint of the national security, may be preserved for the Nation, I have set them aside as a naval petroleum reserve.

In May 1952, President Truman had vetoed a bill giving the states title to offshore lands, stating,

In recent years, we have changed from an oil exporting to an oil importing Nation. We are rapidly using up our known reserves of oil; we are uncertain how much remains to be found; and we face a growing dependence upon imports from other parts

of the world. We need, therefore, to encourage exploration for more oil within lands subject to United States jurisdiction and to conserve most carefully, against any emergency, a portion of our national oil reserves.

The decision has been made by the Congress of the United States to bring the Alaskan North Slope oil south in the 1970s. President Nixon has called for an intensive leasing schedule on the outer continental shelf. Each action brings the day closer when this nation will be dependent on foreign oil imports. In our opinion, the Draft Statement needs to explore the national security implications of a crash program of exploitation of OCS oil.

Conclusion:

In conclusion, the Sierra Club urges that the Department of the Interior take steps to issue a new and revised draft environmental impact statement. If you have any questions concerning these comments or need any information about the Sierra Club's position please contact the writer.

Very truly yours,

Bill Futrell

William Futrell

Board of Directors, Sierra Club
Chairman, Sierra Club Task Force
on Oil and the Ocean

WF/eds

b. Natural Resources Defense Council, Inc. (NRDC)

Disposition

The NRDC has expressed its desire to associate itself with Sierra Club's review comments of the DES. Therefore, our responses to Sierra Club's comments should be consulted by NRDC. All of the issues outlined by NRDC were identified by the Sierra Club and, therefore, appropriate disposition has already been indicated.

Natural Resources Defense Council, Inc.

1710 N STREET, N.W.

WASHINGTON, D.C. 20036

202 783-5710

September 17, 1973

New York Office

36 WEST 44TH STREET
NEW YORK, N.Y. 10036

212 986-8310

West Coast Office

664 HAMILTON AVENUE
PALO ALTO, CALIF. 94301

415 327-1080

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David Sive, Esq.

Dr. George M. Woodwell

Edwin M. Zimmerman, Esq.

Director

Bureau of Land Management

Department of the Interior

Room 5660

18th and C Streets, N. W.

Washington, D. C. 20240

RECEIVED

Dear Sir:

Enclosed are NRDC's comments on BLM's draft environmental statement for the proposed Mississippi-Alabama-Florida OCS lease sale. I hope you will accept these comments despite our failure to meet your September 1 deadline. We found the 40 days allowed to comment on this 700-page document entirely too short.

Please note that NRDC finds the draft statement inadequate due to the absence of key environmental impact data. We hope you will remedy this deficiency before taking any steps to carry out the proposed lease sale.

Sincerely yours,

Thomas B. Stoel, Jr.

Thomas B. Stoel, Jr.

Edward L. Strohbehn, Jr.
Edward L. Strohbehn, Jr.

Enclosure

TBS:ELS/scr

Natural Resources Defense Council, Inc.

1710 N STREET, N.W.
WASHINGTON, D.C. 20036
202 783-5710

Palo Alto Office
664 HAMILTON AVENUE
PALO ALTO, CALIF. 94301
415 327-1080

New York Office
15 WEST 44th STREET
NEW YORK, N.Y. 10036
212 869-0150

COMMENTS OF THE
NATURAL RESOURCES DEFENSE COUNCIL, INC.,
ON BUREAU OF LAND MANAGEMENT'S
DRAFT ENVIRONMENTAL STATEMENT
ON PROPOSED 1973 OCS OIL AND GAS
GENERAL LEASE SALE
OFFSHORE MISSISSIPPI, ALABAMA, AND LOUISIANA

Thomas B. Stoel, Jr.
Edward L. Strohbehn, Jr.

Natural Resources Defense Council
1710 N Street, N. W.
Washington, D. C. 20036

September 17, 1973

The Natural Resources Defense Council (NRDC) finds this draft environmental statement similar to the statements recently produced by BLM on other proposed OCS lease sales. NRDC has commented extensively on a number of these past statements. Many of the defects noted by NRDC in those comments -- such as perfunctory and inadequate discussion of alternatives -- are again present in this statement. Some of these defects, and others, are pointed out in the generally excellent comments on this draft statement submitted by William Futrell on behalf of the Sierra Club. NRDC would like to associate itself with the Sierra Club comments.

The feature of this proposed lease sale which distinguishes it from those proposed in the recent past is that the sale would occur mainly in "virgin" areas where there has been no oil and gas development. What is obviously needed prior to oil and gas development in such an area is detailed information about the area's biologic environment and the likely effect of development on that environment. Congress intended to assure that such information would be generated and considered in decisionmaking when it enacted section 102(2) of the National Environmental Policy Act. Section 102(2)(G) requires that agencies "initiate and utilize ecological information in the planning and development of resource-oriented projects,"

and section 102(2)(C) requires that such information about environmental impact be contained in an environmental statement.

This environmental statement does not inform the reader about the likely impacts of oil and gas development on the biologic environment of the areas proposed for leasing. Instead, at pp. 245 et seq., 385 et seq., and 396 et seq., the statement largely confesses ignorance of these crucial impacts. Almost all of the impact studies cited in the statement were conducted in environments very different from that of the areas proposed for leasing. The statement does not even attempt to describe in detail the types of studies which would be necessary to provide adequate information, the degree to which availability of such information would improve the decision-making process, nor the length of delay in leasing which would be required to complete these studies. Rather, at p. 649 the statement appears to adopt the view that no delay can be justified by a need to get more information, without ever stating any reasons for this conclusion.

Because of the absence of crucial environmental impact data, NRDC finds this draft environmental statement inadequate either to satisfy the requirements of NEPA or to form the basis for environmentally responsible decisions about the proposed lease sale. NRDC believes BLM must begin by revising this draft statement so as to focus on this lack of data and assess

realistically the consequences of delaying the sale until it is remedied. NRDC urges BLM and the Secretary not to implement the lease sale proposal until such a revised draft statement has been issued and comments on it received.

c. Florida Audubon Society

Disposition

All of the extensive review comments submitted by the Florida Audubon Society were given careful consideration in preparation of the FES.

Where appropriate, suggested changes, additions and specific recommendations have been incorporated in the FES with the following exceptions:

Pg. 12, item p 14 - CFS 6100 does not furnish up to date data for marine resource values of the eastern Gulf. This publication presents very limited sport fishery information, and the information is dated no later than 1970. Also, this publication does not differentiate subregions within the Gulf. Therefore, we feel it is more reliable to use data from CFS 6200 which reflect the latest information pertaining to salt water angling surveys.

Pg. 13, item p 53 - The oil and gas industry is continuing to make a strong effort to lower the amount of oil released with produced water below a 50 ppm concentration. They have achieved success when working with one crude gravity and a constant oil-to-produced-water ratio. They, as yet, do not have the capability of significantly increasing the separation system efficiency when working with varying water-oil ratios and varying crude oil gravities as is commonly the situation for a platform with wells producing from more than one reservoir.

One problem lies with the ability of known testing systems to detect small amounts of crude oil in water. The Geological Survey has recently found that the "ultraviolet absorption" method works well

with high gravity crudes but an "infrared" test appears to be the best for a range of gravities. Testing of various methods is continuing. Upon obtaining conclusive data, operators will be notified of the test method to use.

Produced water discharges are tested monthly. Four samples, within a 24-hour period, are obtained from each installation. The latest monthly report revealed only one incident of non-compliance out of 360 subject to disposal restrictions. The installation at fault was shut-in for three days during which time, measures were taken to comply with the regulations.

Pg. 15, item p 61 - The U.S. Coast Guard advises that there are no specific regulations governing tanker loadings during attendant weather conditions and sea-state. However, the captain of a port may issue orders to suspend oil transfer operations if he finds that there is a condition requiring immediate action to prevent the discharge or threat of discharge of oil. (33 CFR, 154.140) It would be expected that operators themselves would not want to risk spillage of valuable cargo or endangering men and equipment during transfer operations. Individual discretion does play a role in transfer operations.

Pg. 15, item p 62 - It is our understanding that no deepwater port facilities will be located in an area where there are no refineries. Because no new refineries will be built as a result of this proposed sale and because deepwater ports are closely linked to refinery availability, we expect our proposal to have no affect, one way or another, on considerations to make Tampa a superport.

Pg. 18, item p 174 - The NOAA-NMFS Current Fisheries Statistics reveal that the greatest poundage of fishes are harvested within 12 miles of the shoreline. These species which are utilized in the commercial and sport harvests are seatrout, bluefish, mackerel, sheepshead, drum, and the greatest volume of commercial species are mullet and menhaden.

The greatest sport fishing effort occurs in the Tampa area. A majority of the man-made and natural fishing reefs are within 12 miles of the shoreline. Also, the Florida Board of Conservation reports that a large majority of artificial reefs are located within five miles of the shoreline and few exceed 10 miles.

Pg. 18, item p 180 - Barging routes cannot be projected until it is known how much will be permitted to be barged and from where it will originate.

Pg. 18, item p 182 - The object of this data is to present an overview of the history of Gulf Fisheries and relates to Thompson and Arnold's study.

Pg. 19, item p 186 & 188 - We agree that the grouping of "reef and other oceanic species" are inhomogeneous in species and vertical orientation. However, we have coined this phrase to characterize a salinity and horizontal zonation possibly seaward of the more euryhaline oriented species.

Pg. 20, item 219 - The release of drill cuttings is unavoidable from an economic and from a practical aspect. Larger platforms would be required to provide the room necessary for cutting storage during periods when seas prevent the mooring of standby barges. Barge

traffic in the Gulf would be significantly increased. Unloading facilities would be required further increasing port congestion. Disposal of cuttings on land would encounter problems of space limitations, transportation and environmental objections in many areas, and would further aggravate the current onshore disposal problem.

Drilling fluids are not disposed of after each well, but are used for succeeding wells and then sold to other operators whenever possible. Solid waste materials are transported to shore (see OCS Order No. 7). Much formation water is reinjected when suitable subsurface formations exist and when platform restrictions permit the additional space required for storage and injecting facilities. Platform and pipeline locations are designed to avoid or minimize conflicts with fishery operations.

Pg. 21, item p229- Tanker releases associated with this sale, if they occur, will not be on the high seas, but on the shelf or near shore areas and could impact on small, shallow, confined areas.

Pg. 21, item p 241 - In special areas of unique value the onsite disposal of drilling muds and cuttings can be prohibited. This would be on a case-by-case basis, however. We believe present constraints combined with NPDES permits required for disposals are adequate in most cases to prevent unnecessary damage to the environment.

Pg. 22, item - 253 - We sincerely hope our estimates prove to be pessimistic and high, and that the petroleum industry and appropriate State and

local authorities will closely police these operations in order to control or eliminate incremental degradation of estuaries associated with tankering.

Pg. 22, item p 257 - The direct effect is on the marine grasses and the synergistic effect is on the manatee.

Pg. 23, item p 267 - We agree that, considered independently, studies on the effects of the Santa Barbara spill do not constitute a good basis for prediction of impacts in biotic communities in the Gulf of Mexico for several reasons:

- 1) The oil spilled was an "asphaltic" crude, whereas Gulf crudes tend to be "paraffinic"
- 2) Part of the shoreline in California was rocky, whereas the eastern Gulf has no rocky intertidal areas.
- 3) There is considerable difference in community composition; e.g., Listriolobus beds, kelp beds, extensive patches of Polycipes and Mytilus in the intertidal--in California; e.g., extensive marine grass beds, Sargassum, vast expanses of deltaic wetlands, oyster reefs--in the eastern Gulf
- 4) The site of the California spill has been subjected to heavy natural seepage, whereas we know of no seeps in the eastern Gulf
- 5) California beaches are high-energy beaches with extensive seasonal erosion and accretion. Gulf beaches are moderate to zero-energy beaches.

However, we maintain that of all the studies available the Santa Barbara spill is still one of the best to use in predicting possible impacts from spilled oil in the eastern Gulf because:

- 1) It concerned the spillage of crude oil from a blowing well, something no other substantive studies have done. (Only the Mackin and Resources Technology studies involve oil well spill studies. The former is limited to oysters and the integrity of the latter has been seriously questioned by reputable scientists.) Tanker spills, making up the balance of the oil spill studies, have occurred very close to shore or in a bay, usually involving the very rapid release of the entire cargo, and in several cases, the spill consisted of highly toxic refined petroleum products.
- 2) The results of the Santa Barbara studies have generally been accepted by the scientific community. Criticism has not been significant, but usually consists of comments about the lack of in-depth analysis, i.e., much study was limited to visual observations, and enumerating living and dead organisms, in contrast to the extensive chemical analyses performed at Woods Hole.

Pg. 24, item p 289 - We have looked into this matter and we are unaware of any litigation in Texas and Louisiana resulting from trawling operations and unburied pipelines beyond the 200 foot contour.

Pg. 27 -- A no-liability clean-up coop would have to be established as a voluntary program with voluntary contributions from industry. We have no statutory authority to establish such a program. There is, of course, a National and Regional oil and hazardous substances contingency plan (see Vol. 2, Sec. IV. A. 4.) and an industry oil

spill response program (see Clean Gulf Associates, Vol. 2, Sec. IV. A. 4. c.).

Pg. 27 -- The Coastal Zone Management Act of 1972, P.L. 92-583, recognizes that it is in the national interest to provide for the effective management, beneficial use, protection and development of the coastal zone. To achieve these objectives the Act authorizes Federal grants to coastal states for the development of coastal zone management plans and grants for their implementation after approval by the Secretary of Commerce. The Secretary must find prior to approving a plan that among other objectives the plan provides adequate consideration of the national interest related to the siting of facilities needed to meet requirements other than local in nature. In addition, the plan must assure that local land and water regulations for the coastal zone do not unreasonably limit or preclude uses of the land and water of regional benefit. The Secretary of Commerce is to coordinate his activities under the Act with other interested Federal agencies. He may not approve a management plan unless the views of the Federal agencies principally affected have been adequately considered. Once a plan is approved, Federal agencies conducting supporting activities affecting the coastal zone must conduct these activities in a manner which is, to the maximum extent practicable, consistent with state management programs. To contribute toward this end the Act establishes a certification requirement whereby applicants for a Federal permit or license for an activity affecting land or water uses of the

coastal zone must certify that such activity is in compliance with the state program and will be conducted in a manner consistent with it. The state is provided an opportunity to agree or object to the certification. No license or permit may be granted by the Federal agency if state approval is not received unless the Secretary of Commerce finds after receiving comments from the Federal agency involved and from the state, that the activity is consistent with the purposes of the Act or that it must proceed in the interest of national security.

The spirit and letter of this law provide considerable impetus for coordinated Federal and state planning to effectively manage the compatible development and protection of the coastal zone during the course of oil and gas operations on the Outer Continental Shelf which will result if a decision is made to hold this lease sale. The interests of the Federal Government in assuring that national needs for oil and gas are fulfilled are protected by the provisions of this statute summarized above as are the interests of the coastal states in assuring the careful planning of the development of their coastal zone. If the necessary funding is provided for development and implementation of coastal zone management plans, the certification process will assure that development of the Outer Continental Shelf offshore Mississippi, Alabama, and Florida and appurtenant facilities onshore will be done, to the maximum extent possible, consistently with approved state management programs.



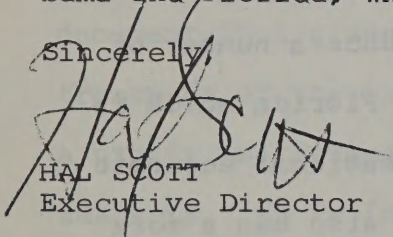
September 1, 1973

Director (310)
Bureau of Land Management
Department of the Interior
Washington, D. C. 20240

Dear Sir:

Enclosed you will find a copy of our supplementary Comments on the Draft Environmental Impact Statement for the Proposed OCS Oil and Gas Lease Sale for Offshore Mississippi, Alabama and Florida, which we indicated would be forthcoming.

Sincerely,


HAL SCOTT
Executive Director

HS/ahs

Encl.

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"The Voice of Conservation" **FLORIDA AUDUBON SOCIETY**

PH. (305) 647-2615 • P. O. DRAWER 7 • MAITLAND, FLORIDA 32751

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE
PROPOSED OCS OIL AND GAS LEASE SALE FOR OFFSHORE MISSISSIPPI,
ALABAMA AND FLORIDA

(Supplement to Oral Statement)

Edward T. LaRoe, Ph.D.
Vice President
Florida Audubon Society

September 4, 1973

For the past two and one-half years the Florida Audubon Society, aware of the imminent sale of offshore leases in the eastern Gulf of Mexico, has attempted to work in a rational fashion with the petroleum industry and state and federal governments to plan and develop regulations for the offshore operations. The expansion of the offshore industry into the as yet untapped areas of the eastern Gulf can be expected to produce a number of conflicts. These conflicts will be maximized in Florida which is not only heavily dependent upon tourism and recreational economic benefits provided by the coastal zone, but which also has a more densely populated and more heavily used coast than other Gulf states. While Florida Audubon does not feel that the offshore petroleum industry is a desirable development, it does recognize the present pressure for expansion. We have also recognized the great role that proper planning can play to at least partially resolve the conflicts as well as reduce the environmental risks and impacts involved. For the first time in the development of a new offshore field, the opportunity exists to plan in advance for the proposed operations; we can observe the technology, management and impact of offshore petroleum in other areas and plan now for long-term

goals defined prior to our entry into the offshore arena. It is with this awareness that Florida Audubon has participated in the planning and has awaited the Draft Environmental Impact Statement for the proposed lease sale. We felt that this sale and this Statement had assumed^{extreme}/importance, not only for the future of Florida's resources and economy but also because this was the first in a proposed series of sales in virgin areas. The Florida, Mississippi, Alabama sale offered an opportunity for innovative planning and regulation which would lead the way to safe operations; this Statement should serve as a model for future environmental impact statements for offshore oil along the Atlantic, Pacific and Alaskan coasts.

It is especially because of this expectation that we find the Draft Environmental Impact Statement a very discouraging document. The Statement is a diffuse, disorganized, and self-contradictory document that gives only superficial, generalized and uncritical treatment of the issues. The data and conclusions are presented in a prolix and fragmented manner which discourages efforts at detailed analysis. It is in fact not a statement, but a series of statements pasted together without any editing. It attempts to overpower the reader by its sheer bulk. It is an inconvenience and an insult to the general public, concerned citizens and knowledgeable experts to ask them to wade through this and critically appraise it.

The EIS contains many factual errors which destroy confidence in its competence. More important, however, than the errors which occur in what is presented, are the things which are omitted. Much attention is paid to trivia while many important concerns are slighted.

The Statement appears to be predicated on the idea that many impacts will be discussed, admitted, and then dismissed with the excuse of "incomplete knowledge." On this basis the report concludes, without any supportive evidence, that the impacts will all be short term and insignificant. The Statement avoids a real discussion of significant problems as well as making any firm recommendations for improvement. It was apparently prepared to justify rather than evaluate the environmental impact.

One of the real problems - both in the document itself and in efforts to criticize it - is the many inconsistencies in the factual data presented as well as in its style of presentation and organization. The impacts are not analyzed in an organized fashion. One consistent approach - such as analysis by type of operation or by type of impact - should be chosen and adhered to. For example, one proposed classification scheme might be:

Impacts of

- 1) Construction
 - a. platform
 - b. pipeline
 - c. onshore structures
 - 2) Production and operation
 - 3) Accidents
 - a. small spills
 - b. major spills
- etc.

Impacts of such operations might be systematically analyzed for offshore, nearshore and onshore effects. Instead, we are presented with a variety of schemes which destroy the continuity and value of the report.

The impacts are presented uncritically. Minor impacts are presented in such a fashion as to appear equal to, or at times even surpass in significance, the more important impacts. This illusion is heightened by the uncritical use of a simple matrix, which rates all benefits and all impacts of equal value. A great deal of space is devoted to the effects of the offshore construction and operation of platforms, for example, which will probably have only a very minor impact, and much less consideration is given to the impact of pipeline construction in nearshore and onshore areas, which has a far more damaging potential. The Statement appears to mention every kind of possible impact in an effort to prove its objectivity; yet because of its failure to critically evaluate these impacts it remains intellectually dishonest.

Because of the natural resource and economic benefits of sport and commercial fisheries, these subjects should be one of the most important; yet these sections are treated in a cursory and knowledgeable fashion. Not only are there many technical and scientific errors in the sections on fisheries but there are important omissions and inadequacies as well.

One of the major errors in the fisheries section is that the Statement addresses only the past or historical fisheries; it does not consider the future fishery potential of the Gulf area. When one analyzes past fish catch statistics, it becomes apparent that the fish catch in the Gulf has increased dramatically largely through changes in technology and economics which make new fisheries feasible. The stocks which support the new fisheries have always existed but

for one reason or another were or are not utilized. Today there are still several kinds of fishery resources which appear promising and even necessary, and which are known to be under-utilized. In an era of rising food costs, it would appear more so than ever before that these new stocks will be fished. Such species in the eastern Gulf include clupeids, tuna, hake, and rock and royal red shrimp. In a similar fashion the sport fishing industry, too, is expanding. Today the longest base sport fisheries in the world are in Brazil and the Gulf of Mexico. Sport fishermen in the Gulf, especially from Tampa and increasingly from ports in the Florida Panhandle, Mississippi, and South Port, Louisiana, routinely go out 50 to 100 miles for marlin and other sport fish. The recent discovery of the sport fishing potential of the Gulf Loop Current some 80 miles offshore in the Gulf of Mexico, west of Tampa, will apparently stimulate offshore sport fishing even further.

The Statement fails also to consider the total value of commercial or sport fishery resources. It considers at most the ex-vessel price to the fisherman, but excludes the economic and employment values of fish processing and packaging plants, wholesalers, shipyards, etc. All of these data are available and would significantly increase the value of sport or commercial fishery resources in the Gulf economy. The Statement fails to distinguish between renewable and non-renewable resources. Renewable resources, such as fishery resources, can with proper management techniques be maintained at a productive yield on a sustained basis. Non-renewable resources, such as petroleum and other minerals, can be removed only once and will not be replaced in our lifetime. Because of the sustained basis of renewable resources, different economic techniques are generally

used when evaluating them. For the value of renewable resources to be adequately compared with that of non-renewable, the income of renewable resources should be capitalized, for example, for a minimum of 20 years at a 10% interest rate.

There are many errors in the fisheries data presented which indicate the failure to understand the terms and concepts used as well as a lack of familiarity with the subject and relevant literature. For example the comment is made in several places that 80% of sport and commercial fishing is done within 12 miles of shore. In fact there is a great deal of both sport and commercial fishing which extends beyond this supposed 12 mile limit. The well established kingfish and mackeral sport fishing normally occurs 20 to 25 miles offshore and the developing fisheries for marlin, sailfish and other sport fish, which is headquartered at Tampa, Fort Walton, Destin and other areas, is located 50 to 100 miles out. Other sport and commercial fish caught beyond the 12 mile limit are grouper, red snapper, cobia, dolphin, menhaden and shrimp. This statement is indicative of another fault in the EIS - impreciseness. One is not sure whether the 80% within 12 miles comments refer to 80% of the fishing effort, 80% of the weight of fish caught, or 80% of the catch value.

In a similar fashion, the Statement reports that pipes which are laid in waters less than 200 feet deep will be buried to a minimum of 3 feet to avoid interference with fishing. In fact there are substantial fisheries beyond the 200 foot depth and the potential for future expansion and new fisheries is primarily beyond that depth. Species such as grouper, red snapper, shrimp, royal/red shrimp, and hake are all existing or potential deep water commercial fish resources.

Many of the several different schemes of classifying marine life and fishery resources used in this Statement (cf. pp 10, 184 and 245) are unusual and at least partially erroneous. The omission of neuston (p.245); the inclusion of seabirds and shorebirds as pelagic marine life (p.259); and the classification of sport and commercial fish by type of estuarine dependence (p.10) - which completely omits non-estuarine dependent commercially important fish from consideration - are not only unusual and confusing, but significant errors.

A great number of technical errors exist in the accounts of various species. For example, contrary to the descriptions, warsaw are not surface feeders and pompano are not oceanic (p.188). Fish eggs (p.256) are not members of the nekton, but plankton. Squid (p.145) in the Gulf of Mexico are not uncommon or rare, but are one of, if not the most common macro - invertebrate, both in individual members and in biomass. They are an important if not the primary food source for most of the marine mammals, some of the oceanic birds, and many of the larger fish.

Little effort is made to apply the references and research which is reported to the situation in the eastern Gulf. Spooner's (1969) comments, for example, regarding the effects of the Torrey Canyon spill on pilchard larvae (p.246) should be the cause for some concern when considered in light of Houde's (1973) result which show that clupeid larvae are extremely abundant in the eastern Gulf of Mexico, or Taylor's (1973) report on the area's past clupeid fishery attempts and future potential. Practical application of specific research is thus avoided. The economic sections are generally weak, vague, and lack any specific purpose or interpretation. Indeed the discussion on the economy of the coastal zone (p.198) is not a true assessment of the economic factors but simply a meaningless recital of statistics

prepared for another summary and again presented in an uncritical fashion. The lack of comprehension of these figures is demonstrated by the inclusion (p.202) of the BEA Economic Area #34 which is located in southeastern Georgia and northeastern Florida. Although this area does include three Gulf coastal counties, the emphasis on Alachua and Duval counties, which are not on the Gulf, illustrates the unfamiliarity with the subject. As mentioned earlier, the failure to distinguish renewable from non-renewable resources is partly an economic problem. The Statement also fails to assess the impact over an adequate time base, limiting the discussion instead to a five to fifteen year period. The Statement lacks any cost-benefit analysis; the total value of fishery, tourist, and other water-related benefits is not compared to the estimated benefits to be derived from petroleum operations.

The ecological sections, too, are weak; they demonstrate a poor and uncritical knowledge of the current literature. The Statement fails to recognize the differences in toxicity and impact of different crude oils or between crudes and refined products. There is no consideration of the different ways in which oil affects the environment: the different physical, chemical, and biological effects it can have on organisms, or the additional social impacts on mankind. The Statement fails to recognize the communities where the petroleum operations will have their greatest impacts, and also fails to critically evaluate the biological and human benefits or values associated with separate communities. It examines each potential impact only as an isolated incident and fails to consider the impacts under conditions of existing stress or the aggregate effect of the

many impacts which petroleum operations will have on the area.

The real value of the eastern Gulf as a richly productive area serving as a habitat for marine organisms, wildlife, and waterfowl is never addressed. The Statement's attitude toward such habitat function and wildlife values is indicated by its characterization of Federal Wildlife Refuges as "outdoor recreational areas, for nature study and natural scenery appreciation" (p.160) which is contrary to the intent of the law as well as the present management policies of the Bureau of Sport Fisheries and Wildlife. At least 7 of the 9 refuges listed in the Statement were established as a result of the Federal Migratory Bird Conservation Act, and were designated as "inviolate sanctuaries" for the protection of wildlife, especially migratory waterfowl. One of these refuges (Cedar Keys) has in fact already been awarded wilderness stature, and at least one more is under active consideration for such designation.

Again indicating the lack of current relevancy and concern for wildlife, the list of endangered or threatened species is also inaccurate. The brown pelican has been classed as an endangered species since May, 1972, and the mangrove cuckoo and short tailed hawk, which are peripheral species in the proposed area, were omitted from the list (p.127).

Many parts of the EIS were taken from the Texas statement without any effort to make them current or relevant. For example, all of the discussions of commercial and sport fishing catch statistics refer to 1971 or earlier data. Yet 1972 statistics (CFS 6100) have been available since March; these should have been used. This same NMFS publication also reports many of the data omitted or just

estimated in the EIS - such as sport fishing effort and value of sport fish catch.

The section on research and education (pp 16-17) also suffers from incompleteness and irrelevance. Certainly the research efforts of GURC or SUSIO would have been more appropriate to cite as examples of Gulf field research in the area of this sale, than the Texas Flower Garden (p. 16). The list (p.17) of colleges, universities and research institutes is also incomplete; it fails to mention the many state and federal research institutes (e.g., NMFS & EPA) located in and utilizing the Gulf for research. There are even errors in the university data: the Rosenstiel School is not a part of the University of Florida system, but a School within the University of Miami (a private institution).

The Environmental Impact Statement is internally inconsistent in several places. For example, the Statement reports (p.221) that during the 8 year period 1964-1972 GS records show "a total of 39 significant oil spill incidents connected with Federal OCS oil and gas operations in the Gulf of Mexico." Later (p.649) the report states "In the history of Federal offshore leasing and production over the past 19 years only 10 significant oil spills have occurred." Other examples of inconsistencies are the reports on the number of onshore pipeline terminals and facilities (6-10, p.279; 5-8, pp 307 & 399); the area of greatest probability of coastal impact of spilled oil (Pensacola p.252 and Tampa p.257) and the potential for new refineries ("existing refineries will be used," p. 306; "a significant increase in Gulfwide refinery capacity is likely," p. 315; "the refining industry...has a growth rate several times greater than the national rate." p.13). Such inconsistency makes the determination

of impact difficult if not impossible.

The impacts themselves are inadequately discussed and frequently dismissed with the comment that complete knowledge is unavailable. Others are dismissed with the observation that the operations will conform to existing state, federal, or local regulations. This, of course, is not a description of impact, but an avoidance of such a discussion. Several statements are made without supportive data.

Mitigating measures are largely a description of existing regulations with few new proposals and no attempt to offer new suggestions in answer to past criticisms (e.g. NASA, 1971; NAE, 1972; GAO, 1973). The discussion of alternatives is frequently irrelevant.

Many of the conclusions are unsupported. For example, the statement (p.397) that onshore facilities will cause only a short-term decrease in productivity ignores the long-term impacts of a) the permanent removal of productive coastal lands from the system and b) their replacement with a pollutant producing source.

Nowhere is the anticipated production from this sale analyzed in relation to total petroleum reserves or total petroleum needs. One comment that "production from (these) tracts ... would represent a significant contribution to meeting domestic energy needs." (p.415) is completely unsupported. Indeed, using data in the statement (maximum production estimated = 590,000 bbl/day; 1971 petroleum consumption = 15 M bbl/day) it is apparent that this sale would supply only about 3% of the petroleum needs, or slightly more than 1% of the total energy needs, of the nation at the 1971 rate of consumption. This hardly seems significant. Put in this light, other alternatives, especially energy conservation, do seem practical

measures during the time period discussed.

These failures involving mitigating measures and unrealistic assessments of need and impact, are the most significant faults of the Draft Statement. Although it is impossible, because of time and manpower restraints, to list all of the errors or faults of the Statement, the following is a partial list of specific comments and questions made on a page by page basis.

- p 10 Fishery Resources: lists are very inadequate, omit, e.g., mullet, red snapper, bait shrimp, plus all non-estuarine dependent fish. See Sykes & Finucaine (1966) USFWS Bull 65(2). and Reid (1954) Bull Mar Sci Gulf and Carib.4(1).
- p 11, 13 Surely boating, sailing, and diving are as popular in Florida as Alabama, Mississippi, and Louisiana. Also shelling. Should distinguish between types of sport fishing, e.g., in-shore, offshore, party boat.
- p 13,
1 6-8 refineries statement inconsistent with later statements. Commercial Fishing: Old data, use 1972, (CFS 6100). Omits consideration of fish packaging plants, etc.
- p 14 Sport Fishing - value and volume listed in CFS 6100.
- p 15 Shipping - How can the number of ships in one area (Mobile) exceed on an average the number of ships in all approaches to that area (Straits of Florida, Eastern and Western Gulf)?
- p 16 Use GURC, SUSIO, or Egmx as examples of relevant research.
- p 17 See comments p. 10. No federal (NMFS, EPA) or state labs. University Miami School of Engineering (MS & PhD in Ocean Engineering) and University South Florida School of Biology (PhD in Marine Biology) omitted.

p 21 No discussion of refineries. Even if they aren't in this area, the crude will be refined somewhere. No consideration of aesthetics, which is a vital part of human society. Failure to separate the industry from resource aspects of sport and commercial fishery impacts (some will impact the fish; others the men, boats, etc.). Debris of questionable benefit to sport fishing: it is not permanent nor widespread (and is supposed to be cleaned up). Regional economy impacts are superficial and questionable. Based on the kinds of benefits considered here, I am amazed a positive impact was not listed for an oil spill on the economy; think of all the dollars spent in cleanup.

Footnote #4 is questionable; there is an apparent intention to use Federal lands for pipeline placement and support facilities in Alaska.

p 28, l 4 This statement fails to evaluate potential effects.

p 40
l 8-10 To the contrary, it appears that inspections are not only imprudent, but fail to meet regulations (see report of GAO, 1973)

p 41 Why wasn't this example tailored to Florida wells (e.g., wells 15,000-18,000 feet deep)?

p 47 In some areas such stubs are severe obstacles to fishing.

p 50, l 6 And on failures where flow is somehow restricted.

l 11 How significantly will costs be increased compared to total operation?

l 19 What is "minimal" spillage?

p 53,
l 12 What happened to efforts to revise water-polishing facility discharge limits? There was talk of lowering the release to 25 or even 10 ppm. How frequently are these discharges tested?

What is the rate of compliance?

Solid Waste Disposal: Identify solid wastes, especially chemical residues.

p 54-55 Disposal of contaminated water and cleansing acid solutions is not specified. It "may" be reinjected. Why not "must be"? What happens if they aren't?

p 55,
l 13+ "Two major incidents" have resulted from workovers. What has been done to prevent recurrence? What changes have resulted in operations or regulations?

p 57, l 25 How long a "period of time"? I seriously question if under-water currents are strong enough at 100 feet or more, 30-80 miles from the coast, to transport enough sediments to cover a pipe. If so, experience has shown that bottom currents generally tend to uncover and undercut pipes, exposing and frequently suspending them in the water column. This would lead to possible rupture and conflict with fishing.

p 58, l 16 Why aren't flow control and leak detection devices required on all pipelines? Why didn't the pipeline "control center" control the pipeline spill which created "the largest oil spill in the history of oil production in the Gulf of Mexico" (p.223)? If this kind of spill occurs with the pipeline "control center," aren't you deceiving the public to stress its importance?

p 58-59 How gross must a leak be before it is detected?

p 59,
l 1-3 What is "as appropriate"? Are there specific regulations requiring pipeline inspection? Are all pipelines regularly inspected prior to detection of leaks?

- p 61 Are there regulations governing loading according to sea-state, or is this at individual discretion? Transfer operations, of course, are the greatest danger points in handling of oil.
- p 62,
1 22 If tankers are used to transfer oil from Tampa to refineries, how will this affect the considerations to make Tampa a superport? What impact would this have?
- p 63,
1 12-13 Are the decks cleaned and waste disposed of prior to unplugging the scuppers?
- p 64 What will be the environmental and economic impacts of the "new wharf facilities, tank farms, separators, and treating facilities."?
- p 65,
1 12 How and where would desulphurization take place?
- p 67, 1 5 Oil and gas production will not continue indefinitely; there is a limit.
- p 68,
1 1-2 The next 5 years will show a three-fold increase over present leased acreage; about one and one-half times more than all acreage that has been leased to date.
- p 69,
1 22-24 Fails to recognize the great importance of the nearshore and onshore areas.
- p 70,
1 21 Also, pollutants in estuaries will not be so rapidly dispersed.
- p 93 & 96 Because of the cyclonic nature of hurricane winds, which would force oil in all directions, the direction a hurricane moves is really irrelevant.

- p 109,
1 6-8 Periods of high winds and waves (greatest chance for oil spill) generally move toward the shore.
- p 111,
1 8 I wouldn't really classify these as high energy beaches. Upland configuration can be due to other processes.
- p 114,
1 6-8 This is contrary to generally accepted theory. What happens to the matter if it is not used or passed up the food chain? These marshes are generally considered as major contributors to the food chain.
- p 116,
1 9 Mangrove seedlings float horizontally, not vertically, until just prior to attachment.
- p 118,
1 7 Some seagrasses are emergent, or at least periodically tolerate some emergence. Species tolerances differ, but they regularly grow in brackish conditions (diluted seawater) to 20 o/oo and lower (Diplanthera grows in Coot Bay at 12 o/oo and Tampa Bay at 17 o/oo (Phillips, 1960).
- 1 13 90% appears to me to be rather high.
- p 125 Endangered Birds: add brown pelican.
- p 126 Peripheral birds: add mangrove cuckoo and short-tailed hawk.
- p 143
1 8 Fish species are not generally West Indian in composition. If applicable at all, this relates just to invertebrates.
- p 144
1 16-17 Add squid. Shrimp are not considered nektonic.
- p 144
1 5 See comments p.7 supra.

p 156+
(Fig. 29b) Omits Magnolia State Park, Mississippi.

p 160
l 14 Federal Wildlife Refuges are not limited - purpose
outdoor recreational areas providing primarily for
nature study and natural scenery appreciation.

See p. 9 supra.

l 19-21 The primary purpose for setting aside land and water
areas for game and fishing is not the increased demand for hunt-
ing and fishing, but the decrease in availability of wildlife
areas needed for nesting, feeding, and habitat.

p 161 Definitions of State Forests and Aquatic Preserves are
again narrowly construed and without understanding of
wildlife - ecological value.

p 166 Add Magnolia State Park (Mississippi).
The historic, educational, and research value of historical
and archaeological sites are ignored.

p 170 No discussion is provided of the value or benefits of
the 350 archaeological sites.

p 172
l 5 Data is recorded; see CFS 6100

l 10 Quantify value of boat construction in Florida.

l 11 Tourist value, support facilities, and bait fishing
business are all significant uses and values that are
omitted.

l 22 Bridges, causeways, and artificial reefs are also popular.

p 173
l 6-14 Party boats are registered and licensed; Quantify their number
and income.

- p 173
1 19 Primary role of artificial reefs appears to be to provide habitat or shelter for nocturnal foraging fishes, which in turn attract predators. The primary function is not apparently food.
- p 174 See comments p.6 supra regarding fishing areas. Twelve mile limit is too restrictive.
- 1 19 1963 is an old reference for something changing as greatly as the eastern Gulf sport fishery.
- p 175
1 14-15 Add billfish
- p 176
1 13 Speckled trout are not deepsea fish.
- p 180 Ports and Shipping: Why are ports outside of the MAFLA area (e.g., Corpus Christi) included? The comparison of 17% (1 9) is meaningless, since the base includes areas outside of MAFLA. To what extent will oil barges use the Intercoastal Waterway? Their use would be a direct estuarine impact.
- p 182
1 8 Data out of date. Use 1972 (CFS 6100).
- p 183
1 4 The industrial bottom fishery has grown primarily by utilizing new species for a fishery that did not exist 15 years ago.
- 1 18 Cf. "growing fishing efforts" with Oppenheimer's claim (p.250) which is presented uncritically.
- 1 19-20 Constant levels of catch with increased fishing effort could also indicate that fish stocks are declining because of pollution.

p 184

1 3 How does this jibe with regulations for burying pipeline?

Important Commercial Species: Scheme of classification is extremely confused.

p 185

1 2 & 10 If resident species are those which "complete their life cycle in estuaries," then they cannot be on the Continental Shelf.

Oysters are omitted from resident species.

1 22 Pink shrimp are omitted.

p 186

1 22 "reef and other oceanic fish" is an inhomogeneous grouping.

p 187

1 7 Striped bass are not in the Gulf.

1 9-11 The menhaden fishery does extend to Western Florida. The catch has averaged over 500 million pounds for the last three years, and was over 800 million pounds in 1972.

1 17 Mullet are also important items in the bait fisheries.

p 188

1 3-5 Grouping not homogeneous.

1 9 Pompano are not oceanic; warsaw not surface feeders.

p 190

Update. State summaries are available on a monthly basis. No excuse for 1971 data. Provide a total for each state as well.

p 196

No aquaculture efforts exist in the Big Cypress Swamp.

Apparently this refers to one effort by the Seminole Indians, near the Big Cypress, to raise a fresh-water prawn. This has no relation to coastal resources.

- p 197 This is an improper comparison of a non-renewable resource with renewable resources.
- p 206
1 5 Water quality degradation occurs from a lot more than just sewage, industrial and dredging pollution; pesticides, urban runoff, agricultural runoff, changes in the hydrological regime (channelization), shipping, etc., all pollute.
- 1 17 There is little doubt that untreated sewage has damaged Mississippi Sound; why the "may"?
- p 207
1 2-13 Imprecise. Does each plant average this value, or do all total?
- 1 19 Paper mills are a major source of mercury.
- p 208
1 14 DDT problem is not most critical in Pinellas County, but in Southeast Florida.
- p 210
1 4 Boating was not listed in recreation of Florida (p.11).
- p 219
1 23+ Why is the release of drilling fluids, cuttings and sand unavoidable? They could be barged to land for disposal. Formation water could be reinjected, or treated. Solid wastes could be barged out. Platforms and pipelines could be located to avoid fishery operations. This attitude fails to assess all possibilities.
- p 220
1 15 And a large-scale reliance on complex technology.
- p 221
1 8-9 No damage is known; this is different from "no environmental damage." Concern for such damage and its effects was much less in 1956.
- Major Oil Spills: At this spill rate (4.6 major spills/yr.)

how many new spills would result from this sale?

It should be recognized that the USGS has a reputation for providing low estimates of spill volume.

p 223

1 10-12 Sediments are unconsolidated muds off Louisiana, but are generally consolidated in the eastern Gulf, with frequent patches of exposed rock.

p 229

1 1-3 Tanker releases are generally dispersed and on the high seas. Production leaks or spills are generally confined to a smaller area and frequently occur over a long duration at the same (shallow) location.

p 230

1 13-14 Calculation of average daily spills are meaningless, as spills will not be small and similar, but infrequent and large.

p 236

1 24 Might this indicate that inspection procedures following the collision were inadequate?

p 241

1 5 Much concern has been shown about the release of drilling muds. Why not prohibit this? Also cuttings?

p 250

1 13 Meaningless; carbon dioxide - and oxygen - have been a part of the natural environment since life began, but are still toxic in excess.

p 251

1 3 Fishing effort has not remained constant, and Oppenheimer's criteria for effort are naive, at best.

p 252

1 12+ Recognition of this statement throughout the entire EIS would have saved a lot of time.

- p 252
l 16 What about tankers and barge traffic?
- p 253
l 8-9 Why accept this as fact? What can be done to reduce it?
- p 256
l 4+ Turbidity can also clog cilia, gills, filter feeders,
physically smother organisms; and prevent settling of some
plankters.
- l 12 If some nektonic organisms actively avoid an area,
significant ecological changes may result.
- l 14-15 No. Impacts may occur from ingestion of contaminated prey,
and by low concentration, non-lethal effects (reduced
mobility, fecundity, growth, etc.; synergistic effects when
combined with other stresses).
- The discussions on these pages fail to recognize that impacts
will be selective.
- Some organisms will be more affected than others. Those
selective differences can alter ecological balances.
- p 257 Calling the manatee a member of the nekton is stretching
things. The impact discussed here is actually on the
benthos - marine grasses.
- p 259
l 22 Woolfenden and Schreiber (1973) report the eastern Gulf
is "important to the existence of large populations of
numerous species of birds." Not "small numbers."
- p 260 Omits consideration of S.S. Brothers George spill in 1964
in Tortugas, which affected nesting sooty terns and other
shore and wading birds.

- p 261 Omits Brothers George spill. Why weren't estimates and regulations concerning the location of onshore facilities made?
- p 263
1 9 (2) is actually a complex set of impacts: effect on larval settling should be distinguished from physiological effects.
- p 264 Why weren't exact routings of pipelines determined? This would be a significant safeguard.
- 1 12-16 Commercial and extensive non-commercial oyster beds do occur in Tampa Bay.
- p 267 The Santa Barbara data is a bad comparison because: 1) it has a different composition, and 2) the hydrocarbon background level there is quite different from that in the eastern Gulf. There was probably some prior species selection or adaptation.
- p 269 Because of the special importance of shallow water communities, this "substantial" impact would be significant.
- p 272 Pipeline operations may result in increased BOD, lowered DO, and changes in water circulation.
- p 273 Santa Barbara beaches are high energy; Gulf beaches low energy. They are not comparable.
- p 277
1 4-5 Vast stretches of coast are not protected by barrier islands, e.g., the river deltas and open marshes of the Big Bend, Cedar Key, Suwanee, Ochlockonee, and Apalachicola areas. Mangroves extend as far north as Cedar Key, and are common around Tampa, the site of proposed heavy barge and tanker traffic. Several references exist on effects on mangroves. See Reutzler and Sterrer (1970); also reports of Cerame-Vivas

(Puerto Rico); J. D. Allen (Panama), etc. Damage to mangroves is generally described as severe.

p 278 Marsh impact might be minimized if operations were timed to avoid seasonal effects on nesting birds.

p 279 Gross visual observation is a callous way to determine impact. Impacts in Louisiana have certainly been greater than that indicated for Texas.

Location of pipelines and terminal facilities is vital, and determination should be exposed to public hearings.

What about impact of construction and operation noise on marsh wildlife?

p 280 Desulphurization will have an impact on air quality.

p 289 Incidents involving trawling operations and unburied pipelines have been the subject of extensive litigation in Texas and Louisiana, and some records should exist.

p 291
l 10-11 Why is crude oil spilled from a ship a "serious threat," when platform and pipeline spills are dismissed as insignificant?

p 293 How do these projections compare to existing barge traffic and petroleum cargo statistics?

p 300
l 10-13 Why not require restoration?

l 21 Why "may tend"? We are not yet at the point where we enjoy swimming in an industrial area.

p 302
l 19-21 Why can't they be avoided?

p 304 California Fish and Game has data for impact of Santa Barbara blowout on sport fishery.

p 306 Construction and industrial expansion in the coastal zone will probably be the greatest impact. What is done here to relate this very real problem to coastal communities?

- p 306
1 9 If refineries are built or expanded elsewhere, there will still be an impact.
- p 309
1 7-9 No. Since the spills would already be in- or nearshore, there would be substantial differences in the effects relating to confinement, concentration, aging, etc.
- p 311 State or local governments generally do not anticipate the magnitude of the problems, and have inadequate regulations. The impact statement should assess the impact in likely coastal communities: Tampa, Cedar Key, Fort Walton, Panama City, Pensacola, etc.
- p 313
1 4-8 Although this sale may be utilized to offset declining Gulf production, this area is a new one, and the landward impacts or stresses will all be new.
- p 314 Cf. projections for refinery increase with past comments.
- p 316 The possible socio-economic impacts are never identified. The conclusions do not follow from the discussion.
- p 324
1 1 This refers just to the nearest shore. All movements would be toward some shore.
- p 329 Coastal impact of construction might be minimized by permitting operations only in the summer months.
- p 331
1 3 Traffic may be scattered, but is not random.
- p 333
1 6 The small boats wouldn't be out there to begin with if the platforms weren't there.
- p 345
1 1+ So what? Most oil containment devices don't work.
- p 351 GAO report indicates inspections are frequently less

often than required.

- p 353
l 10 How many violations were spotted? What was the resulting action?
- p 361 What about spills in State waters? How is the Plan coordinated with State government?
- p 386
l 16 Many kinds of sublethal effects may also result.
- p 414 How long would the development of sufficient wells take so that a pipeline might be used and barging prohibited?
- p 415
l 4-9 This would imply that we are not proceeding to utilize other sources of energy. Which ones have we left unutilized?
- l 12 This is not a significant contribution. (see comments above).

After careful review it is the conclusion of the Florida Audubon Society that the Draft Environmental Impact Statement does not adequately assess the impact of the proposed offshore lease sale. A major fault is the failure to recognize and consider the comments, criticisms, and recommendations made by several prestigious panels; these include: Applicability of NASA Contract Quality Management and Failure Mode Analysis Procedures to the USGS Outer Continental Shelf Oil and Gas Lease Management Program (NASA, 1971); Outer Continental Resource Development Safety (National Academy of Engineering (1972); and Improved Inspection and Regulation Could Reduce the Possibility of Oil Spills on the Outer Continental Shelf (GAO, 1973).

These reports offer several recommendations for improving the reliability and safety of offshore petroleum operations, yet they have been apparently ignored. Many of their suggestions are relevant to the discussion of mitigating measures. Serious questions, regarding, for example, the adequacy of inspections, ^{number of inspectors,} erosion prevention regulations, etc., are raised. We feel that the Environmental Impact Statement

will continue to be inadequate until it individually examines each recommendation of these three reports, and either accepts and implements them, or rejects them only after thorough explanation.

It is apparent that one of the best protective regulations now existing is Florida's strong unlimited liability oil spill law. Efforts to weaken this law should be strongly resisted. It is further suggested that, either through industry cooperation or government leadership, a no-liability cleanup coop be established, along the lines of efforts at Milford Haven and other English and Irish super-ports. Clean-up efforts would be supported by contributions, assessed on some basis such as tanker volume, offshore production, or onshore storage. Under such a program, containment and clean-up could begin immediately, without the delay of assessing responsibility or liability. It would also result in internal pressure, within the industry, for better spill control procedures.

The greatest impact of the offshore sale will be on the nearshore and onshore areas, caused by pipeline construction, onshore support facilities, barge traffic, etc. It is important that state and local governments are thoroughly apprised of and prepared for such impacts. The Draft Statement inadequately describes what can be expected, both biologically and socio-economically, and these should be presented in the final Statement. In addition, it is recommended that the proposed lease sale be delayed until each affected coastal state prepares an approved coastal zone management plan as provided for by the Federal Coastal Zone Management Act of 1972.

Due to the great importance of nearshore and estuarine areas, and the impact that might be expected there, it is suggested that all pipeline corridors and onshore terminal and support facilities be planned in

advance. Public hearings should be a part of the process to determine site locations.

Because of the highly increased potential for oil spills that would be entailed by the use of barges to transport oil from offshore platforms to onshore facilities, it is recommended that barging from platforms be prohibited, and that, after discovery, oil production be delayed until sufficient wells are developed to justify a pipeline.

In conclusion, the Draft Environmental Impact Statement is not an adequate document. It fails to adequately assess impacts, alternatives or mitigating measures. It makes many generalized claims which are unsupported. The EIS appears to be more an effort to obfuscate rather than educate.

We are concerned that the rapid development of this sale has led to hasty and inadequate planning and development of environmental safeguards. If approved in its current state, the Environmental Impact Statement would permit the continuation of present operating procedures. We feel there is ample room for improving those procedures, and urge that the sale be delayed while improved procedures and regulations are developed and adopted. The Florida Audubon Society will remain opposed to this sale until such time as an improved assessment and better safeguards are provided.

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